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ABSTRACT

Lullingstone, in Kent, England, is a Roman villa which was in use for almost the whole period of the Roman occupation of Britain during the fourth century A.D. Throughout this teacher's handbook, emphasis is placed on the archaeological evidence for conclusions about the use of the site, and there are suggested activities to help students understand the techniques and methods of archaeology. The handbook shows how the site relates to its environment in a geographical context and suggests how its mosaics and wall paintings can be used as stimuli for creative work, either written or artistic. It states that the evidence for building techniques can also be examined in the light of the technology curriculum, using the Roman builder activity sheet. The handbook consists of the following sections: Why Visit Lullingstone Villa?; Understanding the Site (Historical Background; Lullingstone's Later History; Roman Villas in Kent); Timeline; Documentary Sources; Resource Sheets (Understanding Archaeology; Found at Lullingstone; Religion and Ritual; The Roman Builder's Handbook; Mosaics; Life in the Villa; Taking a Bath at Lullingstone); Educational Approaches (Building Techniques; Everyday Life at Lullingstone; Religion; Archaeology; Presenting the Site to Visitors; Lullingstone across the Curriculum); Activity Sheets (Archaeology Training Sheet; Lullingstone on Display; Pagan or Christian?; The Roman Builder; Then and Now); and Bibliography and Resources. Contains a bibliography and list of resources. (BT)

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Lullingstone Roman Villa: A Teacher's Handbook [Revised]

Iain Watson

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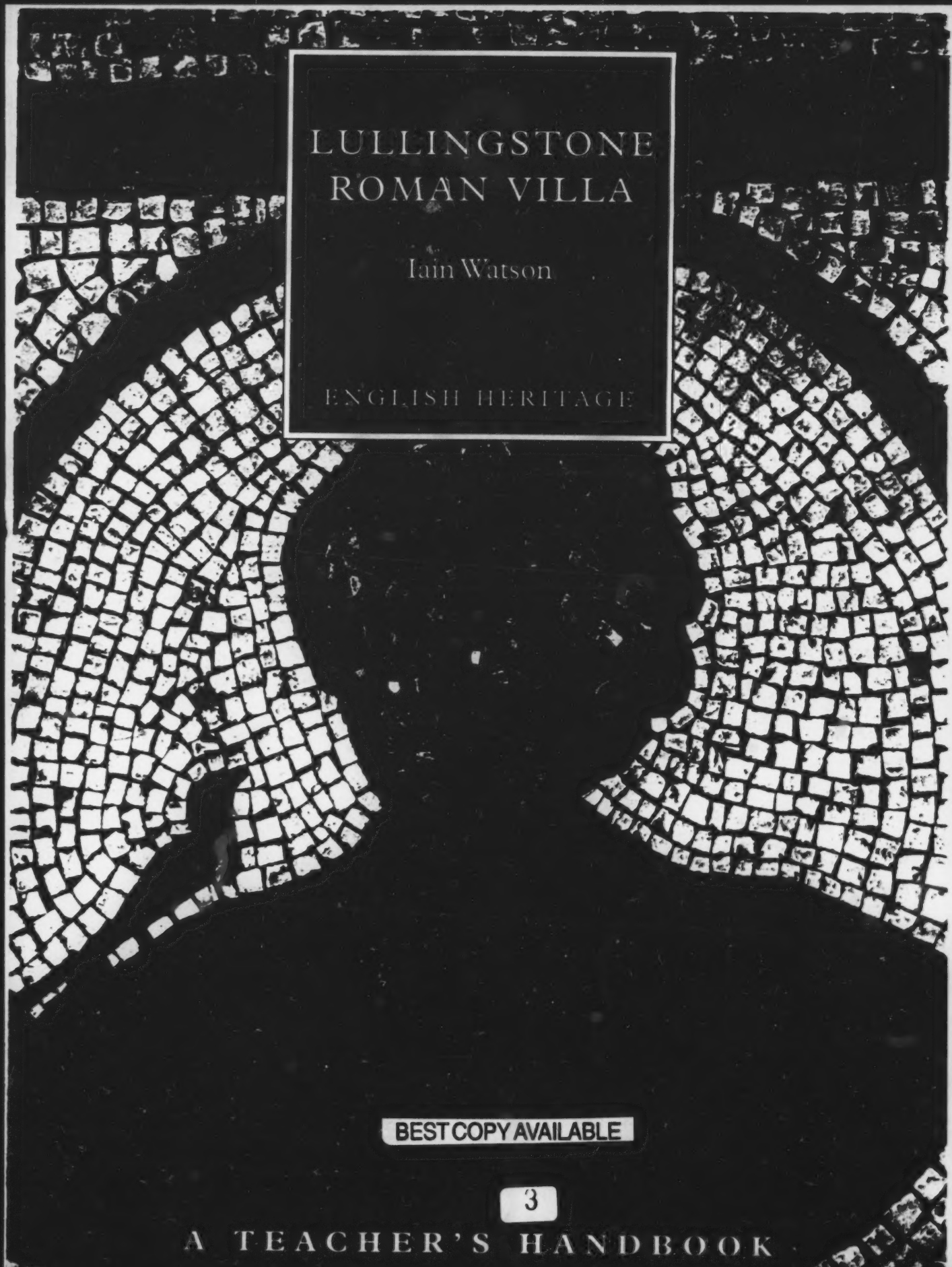

LULLINGSTONE ROMAN VILLA

Iain Watson

ENGLISH HERITAGE

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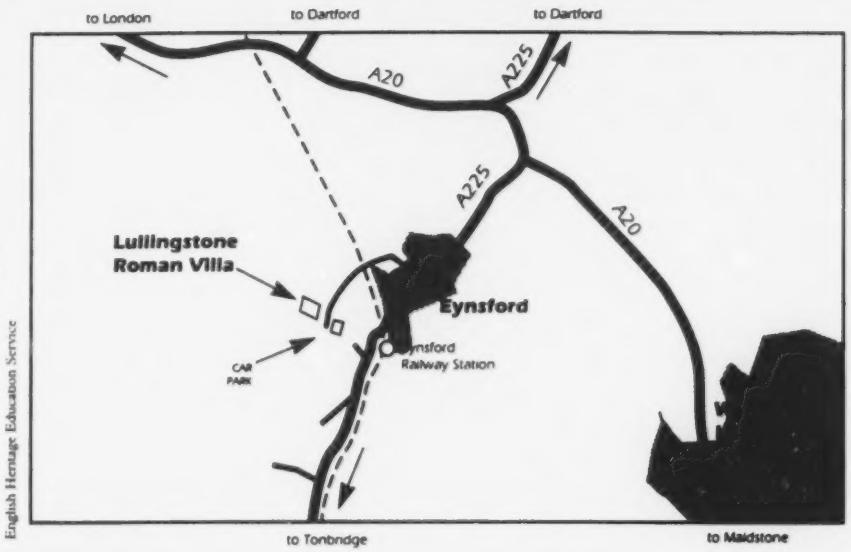
3

A TEACHER'S HANDBOOK

Arranging a visit to Lullingstone Roman Villa

Location

Lullingstone Roman Villa is situated about 1 km south-west of Eynsford village, Kent, on the banks of the River Darent. Eynsford lies on the A225 Dartford-Sevenoaks road. The villa is signposted from Eynsford village. There is a regular train service to Eynsford, and it takes about 30 minutes to walk from the station to the villa.



Facilities

The remains on display to the public are sheltered from the elements by a modern cover building. There is one small kerb between the car park and the cover building. Inside, the walkway that surrounds the remains is easily accessible to wheelchair users. The viewing balcony is reached by flights of wooden stairs. The rooms are labelled with reference numbers, and numbers in this handbook relate to these. There are some showcases on the ground floor, containing some of the finds from the excavation.
There is a car and coach park next to the site. There are toilets in the car park, which are on ground level, but are not specifically designed for wheelchair access.
A small shop sells books, souvenirs and a limited range of refreshments.

Free educational visits

Free visits are available to pre-booked educational groups. Bookings should be made at least fourteen days in advance of your visit. Booking forms and information about site opening hours are available from

English Heritage Education Service,
Freepost 22 (WD214),
London SW1E 5YY.
Tel: 0171 973 3442
Fax: 0171 973 3443

If your pupils are to get the maximum benefit from their visit to Lullingstone Roman Villa, it is essential that you make a preliminary planning visit. Your group visit permit allows you to make a preparatory visit to the site free of charge.

Safety and supervision

Remember that ancient buildings can be dangerous. While every effort has been made to protect visitors from unsuspected hazards, it is not possible to make a ruined building as safe as a modern one. Stress this to your pupils before your visit, and ensure that they are closely supervised at all times while on site, outside as well as inside the cover building. There should be a ratio of at least one adult to every fifteen pupils, and it is your responsibility to make sure that all your adult helpers are properly briefed. Check with your Local Education Authority about insurance and health and safety requirements.

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Edited and produced by Jennie Fordham
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Front cover: Mosaic from floor of audience chamber, showing Spring. (English Heritage Photo Library)

Lullingstone Roman Villa

A Teacher's Handbook

Iain Watson

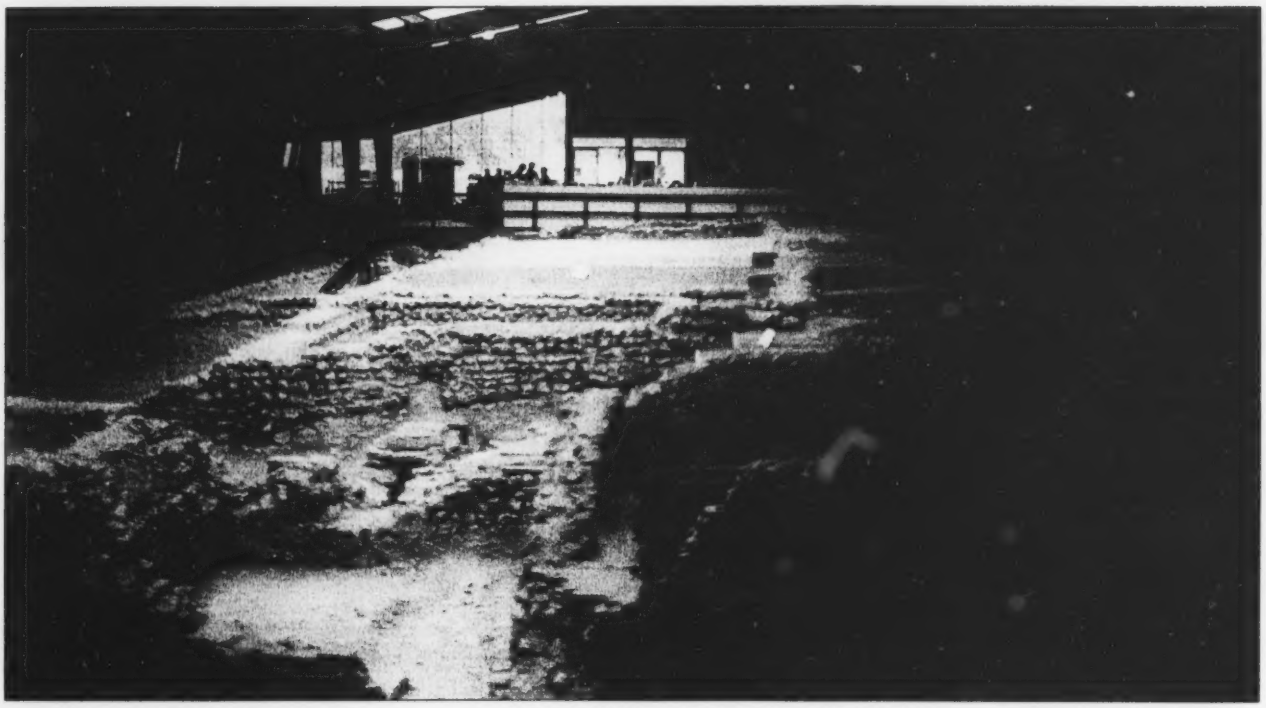
Contents

	page
Why visit Lullingstone Roman Villa?	2
Understanding the site	3
Historical background	3
Lullingstone's later history	3
Roman villas in Kent	3
Timeline	8
Documentary sources	10
Resource sheets	12
Understanding archaeology	12
Found at Lullingstone	14
Religion and ritual	15
The Roman builder's handbook	16
Mosaics	17
Life in the villa	18
Taking a bath at Lullingstone	20
Educational approaches	21
Building techniques	21
Everyday life at Lullingstone	22
Religion	23
Archaeology	24
Presenting the site to visitors	24
Lullingstone across the Curriculum	25
Activity sheets	28
Archaeology training sheet	28
Lullingstone on display	30
Pagan or Christian?	31
The Roman builder	32
Then and now	34
Bibliography and resources	35

Trustees of the British Museum

One of the marble busts from the cellar.

Why visit Lullingstone?



Jennie Fordham

The villa as it appears today

Lullingstone is an exceptional site which offers a wide range of study areas for teachers and pupils to explore. It is primarily of interest as an example of a Roman villa which was in use for almost the whole period of the Roman occupation of Britain. The fortunes of the villa and its owners fluctuated with the prevailing conditions in the Roman Empire at the time and the site reveals periods of great opulence as well as periods of decay.

In the fourth century two superb mosaics, clearly designed to impress visitors to the villa, were installed by the wealthy owners. With their subjects featuring classical myths they would have given the impression (whether true or not) that the owner was an educated person, familiar with classical literature. At the end of the century rooms to the north of the villa were converted into a Christian chapel, and these are perhaps the most impressive remains at the site. This was recognised by the fact that the British Museum chose to reconstruct the Lullingstone chapel in their Romano-British galleries where some of the more important finds from Lullingstone are also displayed.

The site has a mystery and excitement about it, partly because of its post-Roman history. Much brick and tile was removed from the villa in the post-Roman period, some of it again re-used in medieval times for the building of Lullingstone church. The whole site was later buried by clay slipping down from the hillside above. This explains the exceptional level of preservation, and in particular the height of standing wall which survives on some parts of the site.The mosaics were discovered in the late eighteenth century when holes for fence posts were being dug around Lullingstone park. Full excavation of the site started in 1949 under the direction of Colonel G.W. Meates.

Throughout the book, emphasis is placed on the archaeological evidence for conclusions about the use of the site, and there are suggested activities to help pupils understand the techniques and methods of archaeology. Some of the theories about the use of the site remain tentative, as later interpretation of the archaeological evidence called into question some of Meates' interpretations, and so there remains scope for your pupils to make their own judgements and suggestions.

Lullingstone offers an excellent opportunity for groups studying Roman Britain. This handbook also shows how the site relates to its environment in a geographical context and suggests how the mosaics and wall paintings can be used as stimuli for creative work, either written or artistic. The evidence for building techniques can also be examined in the light of the technology curriculum, using the Roman builder activity sheet. The evidence of pagan and Christian religion at the site can be used in religious studies teaching.

Older students can examine the site as a leisure attraction, investigating how it is explained to visitors, and the extent of the visitor facilities.The activity sheet *Lullingstone on display* gives a focus for pupils to make their own decisions about presenting the site to visitors.

Understanding the Site

Historical background

Lullingstone is a very complex site. It is the remains not just of a building at one particular period, but of a complex group of buildings which changed and developed over time. The archaeological remains you can still see were built, at different times, over a period of approximately 300 years. Sometimes rooms were rebuilt, almost in the same place, sometimes they were demolished and new rooms with walls in quite different places were built. The use of individual areas of the villa changed frequently as well.

The villa would have been the centre of a large agricultural estate farming the fertile valley of the River Darent and the adjacent chalk hills. It was one of a number of villas along the river, which were about 4-5 km apart. It was situated to benefit from natural advantages:

- the clear stream (which, as well as providing a source of water, may have powered corn mills and may have been used for transport)
- a steep slope protecting the house
- a fine south-easterly view
- fertile land in the valley for growing crops
- extensive woodland providing building timber and fuel.

A villa is a Roman rural dwelling, inhabited either by a Roman or by a native Briton who had adopted Roman ways. It contrasts with the round huts which the native British farmers lived in before the Roman invasion and which continued to be used throughout the Roman period. Villas varied greatly in size and richness and, at their simplest, were little more than a number of rectangular rooms. Typically, like Lullingstone, they consisted of a number of rooms planned, initially, in a symmetrical fashion often around a courtyard or along a corridor, although the symmetry sometimes disappeared as new rooms were added.

Finds of pottery and coins indicate that there were people living around Lullingstone before the first villa was built and on the hill above the villa are traces of an Iron Age settlement. A timber villa may have been built at Lullingstone towards the end of the first century AD, by which time this part of southern Britain was securely under Roman control and London was the administrative capital of the area.

Lullingstone's later history

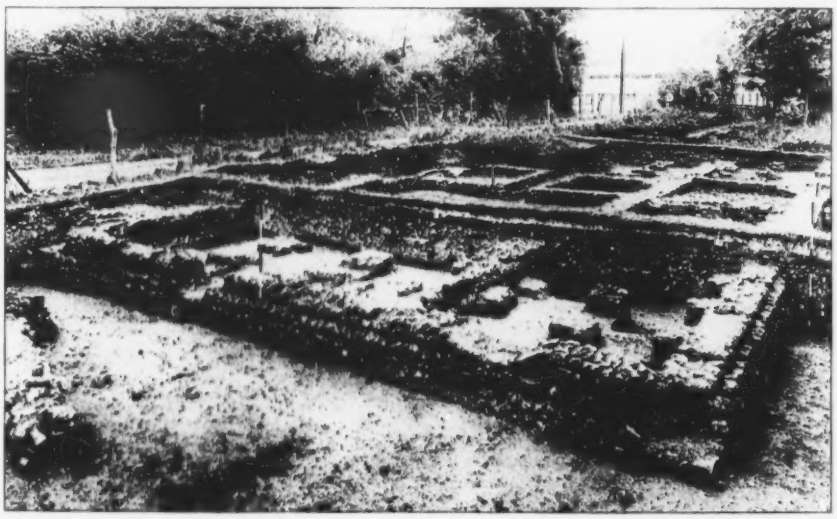
At some date, perhaps a few hundred years after the fire which destroyed the villa early in the fifth century, much stone was removed to build Lullingstone church. Stone may also have been taken for other buildings or field walls. The remains of the mausoleum may have been incorporated into Lullingstone church in the Saxon period.

Some time after, in the medieval period, part of the hillside slipped and buried the villa which is why it is so well preserved. The villa was rediscovered in 1939, although the presence of Roman remains was suspected as early as the eighteenth century. *The Gentlemen's Magazine* recorded in 1823 that a tessellated pavement and various other Roman objects had been found in the area. In 1949, under the direction of Colonel Meates, a group of archaeologists began the excavation of the site. In 1958 the whole site was taken into guardianship by the then Ministry of Works, which erected the cover building to protect the majority of the remains. The site was opened to the public in 1963, and is now in the care of English Heritage.

Roman villas in Kent

There are thirty known villa sites in modern day Kent. This was one of the first areas to be conquered by the Romans, and quickly became stable and prosperous. It was close to London, the seat of provincial government for most of the Roman period and rich villa owners could easily journey to London from their villas in Kent. Many of these villas, like Lullingstone, have elaborate architecture. There are very few mosiacs in Kent however, and it is the quality of those at Lullingstone which add to the importance of the site.

The villas are generally situated in the valleys of the rivers which flow down into the Thames, especially the Darent and the Medway and at the northern foot of the downs, close to



The Society of Antiquaries, London

The granary, during excavation, with the lane leading to the river in the background.

Watling Street (the road from Dover to London).Villas existed in Roman times near the following sites:

Dartford - the remains of two villa sites are known near Tenter's Hill Fields. The site was excavated in the 1980s revealing an H - shaped villa occupied around AD 250-300.

Darenth - a large courtyard villa was excavated in 1894-5 and again in 1969. Evidence was recovered for a baths suite, extensive outbuildings, hypocausts, tessellated pavements, painted wall plaster and window glass.

Farningham - excavations were carried out in the 1960s and again in the early 1970s. The villa appears to have been continuously occupied from the first century AD to the late fourth century and, like Lullingstone, to be of winged corridor shape.

Shoreham - the hypocaust of a probable villa was discovered here in 1947-8 by Colonel Meates, who directed the excavations at Lullingstone.

Otford - excavations in 1927-8 revealed part of a corridor and courtyard belonging to a Roman villa. Further excavations in 1971 revealed walling, rubble, plaster and pottery. Most of the finds are in Maidstone Museum. Pottery and coins from the first to the fourth centuries were found.

Crofton - dating from about AD 100-400, this was a modest villa although it did have a number of tiled floors and an underfloor heating system. Development in the nineteenth century destroyed much of the archaeology of the site, but the villa remains are open to public view.

AD 100-150

History

Around AD 100, a small villa was built, with timber walls on top of flint foundations. The villa was symmetrical and is of a type known as the winged corridor villa. We do not know who lived in the villa at this time but it is likely to have been a wealthy Romano-British farmer and his family who may have traded produce into London.

Description

The villa was smaller than the remains you can see today, and may have replaced a wooden villa built twenty or so years earlier. It had low flint walls, called footings, and on top of these the walls were made of timber up to roof height. Good building stone was in short supply in this area, but there was plenty of woodland for obtaining timber. Because flint is found in irregularly shaped pieces and is almost impossible to square off, the walls were bonded with mortar. This was made from limestone which was heated, crushed and mixed with water. The timber was probably plastered on the inside. The most northerly rooms in the first villa were the rooms labelled 4-5. Here the builders took advantage of the slope of the land down towards the river Darent to construct a cellar room, which you look down into today. The cellar may have been used for storing grain as the Iron Age tribes in this part of Britain used pits to store grain and the Romans took up this practice. Rooms 4 and 5 formed one of the 'wing rooms' of the villa. At this time room 6 was a verandah or corridor linking room 4 to the other wing room, room 7.

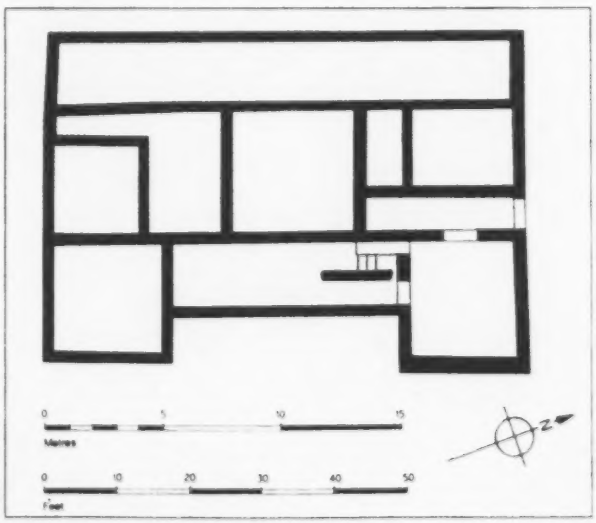
The entrance to the cellar was by a wooden staircase leading down from the verandah.(This entrance was blocked by the later insertion of the niche painted with nymphs.) The cellar was also directly accessible from room 5, which at that time was a passage leading from the entrance to the villa.

The verandah, room 6, ran along the east side of the audience chamber, linking the north and south wing rooms. The verandah was comparatively narrow and the foundations at the front of it were probably buttresses to support it.

The south wing room, room 7, was probably a living room, although no floor survived in this room. Behind room 7 was room 8, which was probably a kitchen. Colonel Meates thought it was an open courtyard, but this is unlikely as it does not fit in with the pattern of villas such as this. At the centre of the villa was the most important room, the dining room, room 22. It did not have an elaborate mosaic at this time but may have had a tessellated floor, made of small pieces of cut pink tile. Room 25 may have been a bedroom. Another corridor, room 21, ran right along the back of the villa.
(Numbers, in this and the following history sections, refer to the complete plan inside the back cover)

Things to look for

- the slope, or ramp, on which the wooden stairs would have been built
- how rooms 4 and 7 form wings to either side of corridor 6.



Plan of the first masonry villa.

AD 150-275

History

About AD 150, or shortly after, the villa was extensively remodelled, using flint and tile rather than timber and daub as building materials. Further improvements were made about AD 180 when a bath suite, including a plunge bath, was added at the south end, probably replacing earlier baths. Changes were also made to the cellar.

From about AD 200 onwards the villa appears to have been neglected. There was no new building and rooms began to fall into disrepair. This period was one of turbulence and economic stagnation throughout the western part of the Empire. In AD 195, Clodius Albinus, the governor of Britain led a revolt against Rome, and it was a number of years before the Roman Empire regained full control over Britain. Colonel Meates thought that the villa had been abandoned completely in the third century. He thought this because the fabric of the building had considerably decayed, and because he discovered two pits that had been dug in a room at the back of the villa, apparently as tanning pits by a leather maker (they were full of leather boots and sandals). The foul smelling tanning process was unlikely to have been carried out in an inhabited villa. However, evidence from coins and pottery found on the site suggests that the villa continued to be occupied throughout the third century.

Description

The expanded villa kept the same basic plan but was extended north and south. The new extensions were separated from the main villa building by narrow passages. Symmetry was still important although, like many other villas, Lullingstone was now less symmetrical than when originally built.

In the main block of the building the main changes at this time were in the cellar. The staircase from the verandah was blocked and the only entrance was from the north passage. The cellar now had very elaborate wall paintings, and was clearly no longer just a store for grain. In a niche on the south wall, blocking the original opening into the cellar, was a painting of three water nymphs. The central nymph is shown with water flowing from her breasts and reeds sprouting from her hair. We think that the cellar was used at that time as a household shrine, possibly to the water spirits of the river Darent.

English Heritage Photo Library

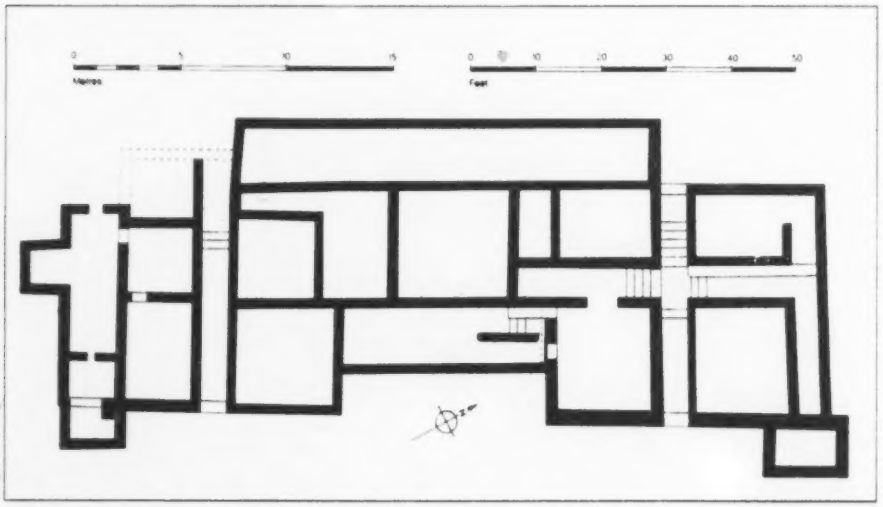
Wall painting of the three water nymphs in the cellar.

At the south end of the villa, you can see the steps which formed part of the corridor separating the main building from the baths. At this time the baths consisted of the recreation room (17), hot dry room (12), hot room (11), hot plunge bath (13), tepid room (14), cold room (15) and water tank (16), with a furnace at the west end (10). (See page 20 for a description of how the baths were used.)

Behind the villa a kitchen was built, not now on show to the public. Kitchens and bath houses were often separated from other buildings because of the risk of fire. It was 9m long by 6.5m wide, was supported by pairs of massive posts and had a concrete floor. At the western end were two large ovens which would have been used for baking.

Archaeologists found a circular flint wall which was probably the foundation for a timber-framed building on the hillside above the villa. Whilst most Roman buildings were rectangular, estate workers frequently lived in round huts, similar to the huts built by Iron Age farmers before the Roman conquest. This building, which is not now open to the public, has a tessellated floor, made up of thousands of small pieces of cut tile. We think it may have been a shrine.

As all the rooms of this period were modified at a later date, there are few obvious pieces of evidence to look for.



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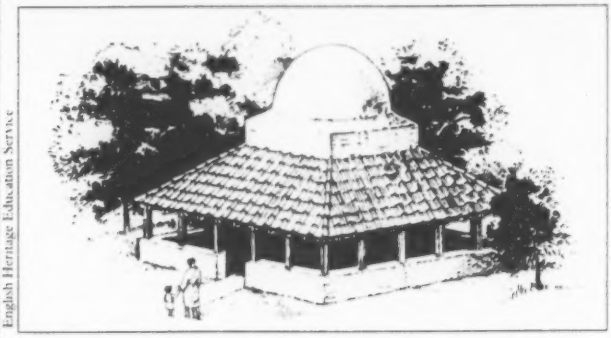
Plan of the remodelled villa, with the baths added, in use AD 150 – 200.



English Heritage Education Service

An artist's impression, showing how the mausoleum might have looked.

AD 275-350

History

At the end of the third century the villa was extensively refurbished. In the main villa building the east corridor (6) was widened over the buttresses in front of it. The baths were extended and a hypocaust system was installed to provide heating for a group of rooms on the north side of the villa. The large granary (now under the car park) and the temple mausoleum (not on show) were built. The death of two young people, a man and a woman, possibly at the same time, must have had a major impact on the life of those living in the villa at the beginning of the fourth century.

Description

At the north of the villa, room 26, and rooms 1,2, and 3 (with hypocaust heating) were added. Heat from a furnace under the modern pavement circulated beneath a floor supported originally on stacks of tiles (pilae), and up through chimneys set at intervals along the wall. The chimneys are an important part of the system as they provide the draught to draw the hot air through the flues; they also meant that the walls were heated. The arch in the wall separating rooms 2 and 3 was originally beneath the floor and allowed the heat to pass through the foundation which supported a wall above. It is possible that the furnace for heating these rooms was in room 1 and the room to the east of this, (now no longer visible).

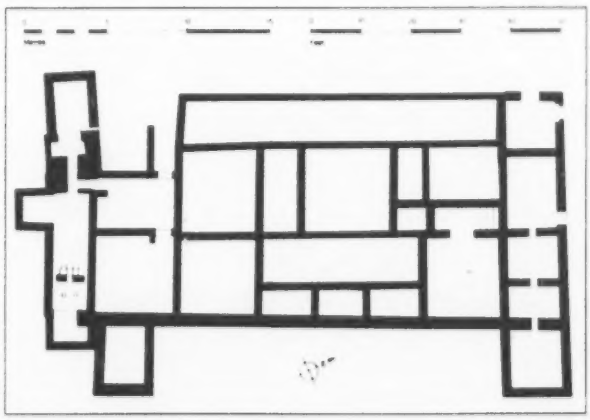
In this period both entrances to the cellar were blocked. Colonel Meates found that the blocked off steps into the cellar had been used as a plinth on which to display two marble busts. In the floor around the busts were buried four pots, perhaps put there to receive libations to the souls of the dead. One of them was engraved with the word 'suavis', meaning 'sweet'.

The room had a thick concrete floor and in the centre was a pit, approximately 0.9m deep, lined with chalk blocks. This pit may have filled naturally with spring water. Access into the cellar at this time must have been directly from the room above, but no evidence of this remains.

The baths were enlarged and the cold room was extended over the south corridor and a new large, plunge bath built.

The apsed, or round-ended, plan of the dining room allowed couches to be placed around the room with a central table – Roman diners reclined on couches to eat formal meals. This mosaic has scorch marks from where burning timber fell on it in the final fire which destroyed the villa.

Plan of the villa, between AD 275 and 350, with the row of heated rooms at the north end.



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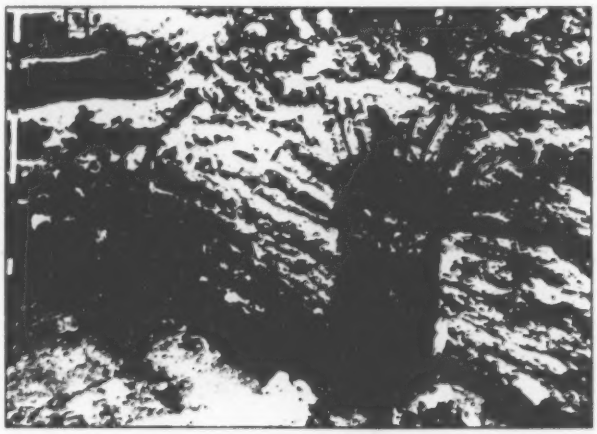


English Heritage and Kent Archaeological Society

Arch under the floor of room 3, which was part of a hypocaust heating system. This photograph, taken during excavations, shows the arch still blocked with soil and rubble.

Room 25 is in the area of the villa where a bedroom might be expected.

The granary was a large rectangular building 24.4m by 10.7 m. It was specially designed with a raised floor which allowed air to circulate underneath so that the grain would not rot. It is one of the largest granaries found in a villa in Britain; from the size of the granary floor it has been calculated that the villa might have had 235 hectares of land growing wheat and oats.

Things to look for

- the arch between rooms 2 and 3
- painting of three female figures in the cellar
- the shape of the dining room
- flues, made of hollow tiles, in the north and west walls of room 3.

AD 350 – 425

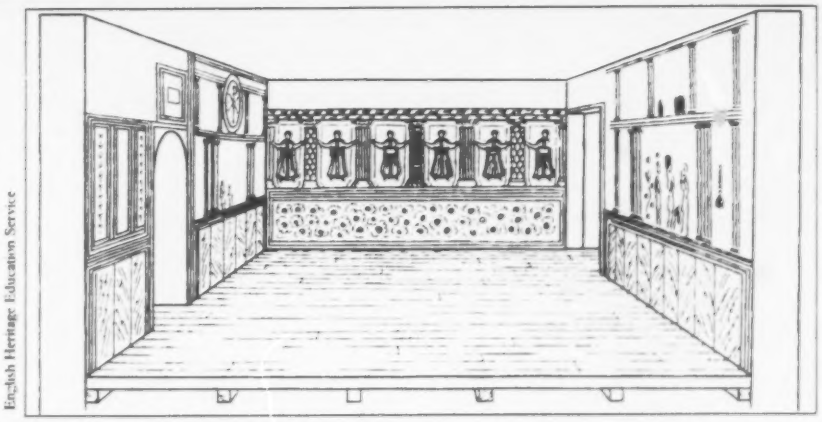
History

In about AD 360 rooms over the cellar on the north side of the villa were converted into a Christian chapel. From this we can assume the the family had adopted Christianity.

In the mid-fourth century, around AD 360, there were further improvements when the large apsed, or round-ended, dining room was constructed. This cut through the west corridor of the villa. The original dining room became the audience chamber, leading into the dining room. Fine mosaics were laid in the principal rooms. They were designed to impress visitors and, laid by skilled mosaic workers, were an expensive luxury.

By the beginning of the fifth century many towns and villas were already in decline as a result of the unrest in the preceding years. The Roman army had been significantly reduced in number and from about AD 407 troops in Britain were probably no longer paid. Soldiers, who had probably been born and brought up in Britain, are likely to have stayed in the locality of their forts with their wives and children, perhaps as farmers. AD 410 is usually known as the date which marks the formal end of the Roman Empire. In that year the Emperor Honorius wrote to Britain, withdrawing support and defence. Romanised life in Britain was coming to an end. By the middle of the fifth century Germanic tribes (Angles and Saxons) had invaded and settled in parts of the south east.

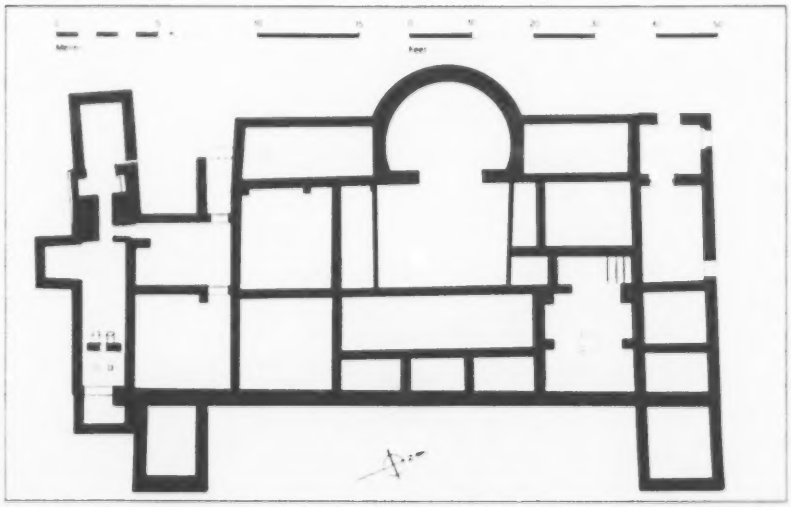
The villa at Lullingstone was occupied into the fifth century, although the bath area had fallen into disuse and the baths were filled in. By this time the economic system upon which villa estates depended was breaking down.The end of occupation at Lullingstone came with a major fire. The house burnt down, but many of the walls were probably left standing to a considerable height, still with their elaborately painted plaster. It is not known whether the fire was started deliberately or accidentally. Archaeologists found the remains of the debris that had fallen when the building burned as well as many charred timbers and the nails remaining from timbers that had burned.



An artist's impression of how the chapel at Lullingstone may have looked.

Description

In the fourth century the hypocaust system was filled with rubble and the rooms were given a wooden floor. Room 3 became an ante-chamber leading into the chapel which was above the cellar. Many fragments of plaster had fallen down into the cellar from the room above. These fragments were pieced together to show that the rooms above the cellar had been decorated with beautiful wall paintings, indicating that the owners were still prosperous. The frieze, which we think was on the west wall of the room, showed six figures with their arms outstretched in the style of early Christians at prayer. Each figure was separated by a painted column. It has been suggested that these figures may have been representations of members of the family, but we cannot be sure of this. Painted on its south wall was a large chi-rho symbol (taken from the first two letters of Christ in Greek).



Plan of the villa after AD 360, showing the large, apsed, dining room.

Things to look for

- the slots, for the joists for the wooden floor, in the top of the wall between the cellar and rooms 1 and 2
- reproduction of the wall paintings on the wall by the site entrance and scorch marks on the mosaic where burning timbers fell.

Timeline

AD 1- 43
Traces of an Iron Age settlement from this period on the hill behind the villa.

AD 43 - c.100
Pacification of the tribes of southern Britain. A timber villa may have been constructed at Lullingstone towards the end of this period.

c. AD 100-150
Villa with timber walls on flint footing constructed at Lullingstone about the beginning of this period.

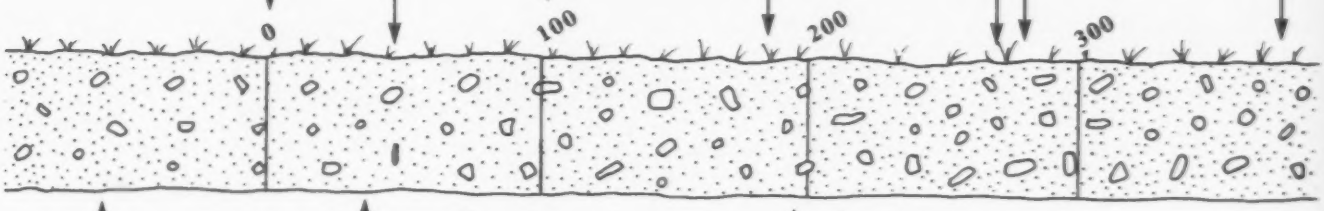
c. AD 180
Villa remodelled and a bath suite built on the south side of the villa. Circular shrine built.

AD 200-275
The fabric of the villa decayed, although it did continue to be occupied.

c. 300-350
Granary and mausoleum built.

c. AD 330-350
Coins buried in pit in room 8.

c. AD 275-300
North side of villa remodelled and a row of heated rooms constructed.



55 BC and 54 BC
Julius Caesar led his expedition to Britain.

AD 61
Boudican Revolt – London sacked, but Kent largely unaffected.

AD 43
Conquest of Britain under Emperor Claudius.

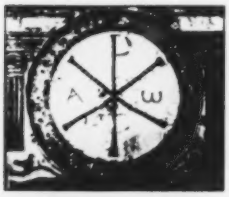
AD 195
Revolt against Rome by Clodius Albinus.

AD 208
Emperor Severus came to Britain to restore control.

AD 313
Edict of Milan legalised Christianity - previously Christians needed to keep their worship secret.

AD 367
Roman Britain attacked by land and sea.

c. AD 350
Construction of large, apsed dining room; laying of mosaics.



c. AD 360
The inhabitants adopted Christianity and converted heated rooms and cellar into a Christian church.

c. AD 420
Lullingstone destroyed by fire.

c. AD 600-800
Remains of temple mausoleum may have been incorporated into Lullingstone church. Stone and tile also robbed from villa.
Hill wash buried part of the remains of Lullingstone, preserving them beneath a thick layer of mud.

AD 1788
Roman bricks and a mosaic pavement found when digging in fence posts.

AD 1823
Gentleman's Magazine records tessellated pavement, coins and other relics near the ruins of Lullingstone Church.

AD 1949-1961
Excavations at Lullingstone under the direction of Lt Col G.W. Meates.

AD 1958
Lullingstone taken into guardianship by Ministry of Public Buildings and Works.

AD 1963
Site opened to public.

AD 410
Sack of the City of Rome by Alaric and the Visigoths. Letter sent by Emperor Honorius urging people of Britain to defend themselves, as Roman support could not be maintained.

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Mosaic in the audience chamber showing Bellerophon riding the winged horse, Pegasus. In the corners are the Four Seasons.

13

Documentary Sources

The discovery of Lullingstone

The story of Lullingstone's survival is an interesting and amazing one, and it is continuing to the present. The story of the discovery of the villa can be traced through the writings of those who were associated with the find.

Colonel Meates, who directed the later excavations at Lullingstone, described how local amateur archaeologists began their work in the Darent valley where there were already known to be three villas (South Darent, Farningham and Otford).

" ...a small group...began a long and painstaking field survey of the upper part of the valley from Farningham to Otford. Every field and hedgerow was scrutinized. The river banks, molehills and rabbit burrows were examined, often with success. In a number of places small quantities of Roman brick and tile with pottery fragments came to light.... All these marks of Roman occupation were inserted on the map and it was at once evident that a building of some size had existed once every two or three miles along the valley from Otford to Dartford. With one exception. A gap occurred at Lullingstone." (Meates The Lullingstone Roman Villa Excavation Report, Vol I)

"The beautiful site of Lullingstone was not, it appears overlooked in Roman times. Near the north-eastern boundary of the park a tessellated pavement [mosaic] was discovered in the course of the last century...."

Hidden away in an issue of the archaeological magazine for Kent the archaeologists then found a reference to an article in *The Gentleman's Magazine* for 1823.

This article then provided a reference to a book published by local historian John Thorpe in 1788, called *Custumale Roffense*. He described the church at Lullingstone, of which there is now no trace, but which may have been above the temple mausoleum.

"From the smallness of it, it appears to have been of Saxon architecture, and built with flints and Roman bricks, the west end being chiefly of the latter. That the Romans had a station (fort) or some building at this place is evident; for the late Thomas Chiffinch.....informed me that Roman bricks had been dug up near the said ruins, and in digging a hole for the third post of the paling from the park gate, part of a tessellated pavement was discovered...."

In addition to the mosaics..... a room began to be excavated immediately north east of the mosaic floor and west of the road, and after prolonged work it became clear that this room was seated deep in the earth. The walls were of unusual height, and at the south end of the house, where the baths were later recognised, the walls also rose to an unusual height."
(Meates The Lullingstone Roman Villa Excavation Report Vol I p. 16)

The information from these writings helped archaeologists narrow down their search for the site, although the landmarks described ha all disappeared and it was the lucky sight of Roman pottery in the roots of a fallen tree th gave archaeologists the clue where to begin their excavations.

Excavations began in 1949.

One of the last incidents in the amazing story of Lullingstone's discovery happened in 1956 when the River Darent burst its banks flooding the excavations at Lullingstone. The excavators thought it was a disaster and that much valuable evidence would have been lost. In fact the flood water dislodged some flints from the top of the cellar wall revealing the arch above the wall painting of the nymphs. Without the flood the painting would probably never have been discovered.

Living at Lullingstone

There is little written information about life in villas in Britain, but descriptions of villa life in Italy may give some clues. The main difference would be the weather - in Britain villas would have to offer more protection from winter. Pliny wrote about his villa at Laurentum in AD 97, on the coast of Italy, where he spent his winters. Your pupils could read these extracts before visiting Lullingstone, make a list of the rooms and facilities Pliny had at his disposal. When they visit Lullingstone, ask them to make comparisions, perhaps using different headings (location, rooms, facilities) to focus their observations.

"In the first part of it the entrance room is plain but not mean. Next there are colonnades which come together in a form very much like the letter D, enclosing a small but pleasant area. This affords an excellent retreat in bad weather, as it is protected....by the overhanging roof. Beyond the middle of this there is an attractive inner court, and next a very handsome dining room....on every side this room has folding doors or equally large windows, so it affords a view from the sides and the front over three different seascapes."

"..a bedroom connected to a passageway with a hollow floor and walls fitted with pipes from which it receives hot air circulated in all directions at a healthful temperature. The rest of this side of the house is reserved for the use of slaves and freedmen, most of the rooms being elegant enough to accommodate guests."

"Next comes the spacious and expansive cold room of the baths, in the opposite walls of which are two bath tubs...Adjacent are the anointing room, the furnace room and also the steam room, then come two small chambers...attached to these is a splendid warm pool, where one may swim..." (Pliny letters, Book II, 17)

" In the baths I have moved forward the steam room into the other corner of the changing room, for under the present conditions the furnace flues come out right beside the bedrooms. The large room and the winter room I thoroughly approve: they are spacious and moreover their position faces the side of the drive nearest the baths."

One hundred and fifty years earlier Cicero had written to his brother about the architecture of his villa (left).

Many books have been written about life in Roman Britain. One of these, *A place in the country*, written by the archaeologist Brian Davison, describes the life of a fictional family living at Lullingstone towards the end of the second century:

"Livia gets up from her bed, puts out the lamp her husband [Petronius] brought from town yesterday, and opens the shutters. "It's going to be a good day" she thinks. Her maid has brought her some bread and fruit; breakfast is not a formal meal. After she has eaten she calls her second maid and tells her to lay out a long white under-tunic and a coloured over-tunic.
"I won't need my head shawl today," she says.
Later, sitting in her tall chair, she watches in her bronze mirror while her maids comb and curl her hair. When it's done they will put on her make-up..."

"The lamps are lit and the couches have been drawn up round the tables. Everyone eats lying down. Livia has brought out the red tableware her mother left her in her will. She has also set out the new brown and white beakers brought by traders all the way from Germany. One of them has 'Don't be thirsty' written on it. The meal starts with a choice of shellfish or stuffed eggs. The...dormice cooked in honey and sprinkled with poppy seeds, together with sausages, olives and damsons. Next, the main meal of the evening: wild sow, roasted, with a row of piglets made of marzipan..."

An evening meal is described.

Ask your pupils to describe the beginning of their own days and their evening meals. What similarities and differences can they see between their own lives and Livia's?

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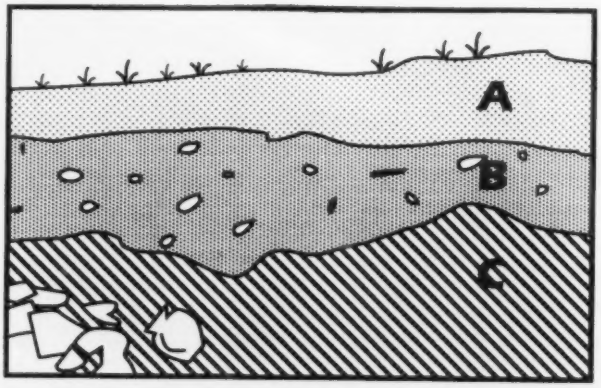
Understanding archaeology

Archaeology is the science of learning about past cultures by studying their material remains. The survival of objects and structures on an archaeological site is a matter of chance preservation. Some objects survive much better than others when they become buried in the ground. The archaeologist has to make the best interpretation possible from the limited and incomplete evidence available.



This diagram shows a slice cut through an archaeological site. It is called a section. A, B and C are different layers in the section.

Stratigraphy

Stratigraphy is one of the main principles of archaeology. It is based on the assumption that, on excavating a site, the first things found by archaeologists will be the most recent. As the archaeologists dig down they will come to earlier and earlier remains.

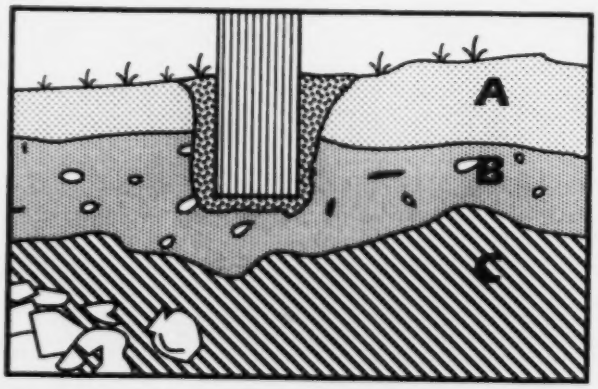
The sequences of building at Lullingstone are very complex. In some rooms the floors show a succession of different layers representing successive floor levels from the first to the fifth centuries, with finds from these levels in the layers. The story of the walls is more complex. Some walls from the early second century were pulled down and replaced either by new walls in the same place or by totally new room layouts. Other original walls continued in use right to the end of the villa's life.

The villa today appears much as it would have done had the roof been taken off in the late fourth century. Some features have, however, been excavated back to an earlier period. In the fourth century, for example, the corridor running along the north side of the reception room in fact carried on over the filled-in staircase well which had formerly led down to the cellar. This staircase has, however, been excavated to show it largely as it was in the second century.

Dating layers by objects

Objects found in archaeological layers can be used to date the layers, if the date of the object is known independently. The most suitable objects for dating are objects which were used for only a short period of time. Coins are attractive for dating since individual styles are usually only produced for short periods of time, perhaps the reign of a particular rulers. Some Roman coins can even be dated to the particular year of an Emperor's reign. In the case of objects such as brooches, where the design was dictated by fashion, a particular style may have had only a brief period of popularity and the object can therefore be used to give a reasonably exact date.

Datable objects in a layer can only be used to give a 'date after which' the layer was deposited. For example, the south pit in room 25 at Lullingstone contained 18 coins. The pit cannot have been filled before the date when the last of these coins was minted. In this case the latest coins were two dating from AD 330-337, and therefore the pit cannot have been filled in before AD 330 at the earliest. Unless there is other evidence, the pit could have been



Sometimes the earliest layers might not contain the oldest material. If, for example, a pit has been dug at a later time through earlier layers, the contents of the pit will be more recent than the contents of the original layers at the same level.

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filled in at any time after AD 330. If the coins are in very good (mint) condition, it is likely that they were deposited fairly soon after minting. If they are very worn they may have been in circulation for a long time before being deposited.

Preservation and survival

Objects are an important source of information for an archaeologist. Many of the things that archaeologists find are other people's rubbish. These things have been old or broken and thrown away, or possibly, as when Lullingstone burnt down, abandoned. Some things for example, coins, could be accidentally lost, and some things, for example bodies and religious offerings, were deliberately buried.

Some things survive in the ground better than others. Most materials suffer varying degrees of damage. Iron rusts and bronze corrodes. Wood and flesh normally rot but bone often survives though it may become very soft. When Colonel Meates excavated the skeleton in the square temple he wrote 'The bones were deep brown in colour, sticky to the touch, and the whole emitted a noxious smell.' Pottery, if it was well fired, is almost unchanged. Stone is also usually unchanged, although it may be stolen from the site for building houses, walls, or, as at Lullingstone, a church.

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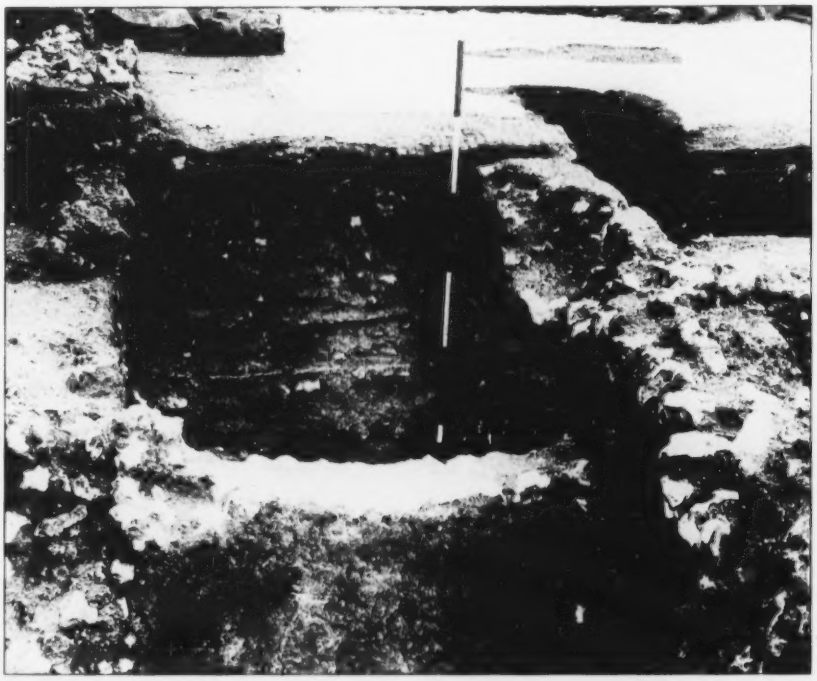
One of the marble busts from the cellar. Colonel Meates suggested they were portraits of real people.



English Heritage and Kent Archaeological Society

The archaeological layers can clearly be seen under the mosaic floor of the audience chamber. In order not to disturb the mosaic floor, the layers were not excavated.

Recording

When archaeologists excavate a site, they record carefully, and in great detail, everything they find. They take accurate measurements of the site, prepare large numbers of drawings and take photographs. This information, along with the objects found and any standing remains such as walls, forms the record of the excavation. It is the evidence recorded that is used to interpret the site. It is important to make this record as complete as possible because when a site is excavated it is effectively destroyed. For example, in the case of the pit in the kitchen behind the villa, if Colonel Meates had not recorded what he found in it, it would now be impossible to work out that the room was formerly used as a kitchen.

Interpretation

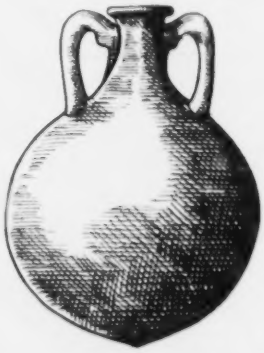
Archaeologists use the evidence they find to try and build up a picture of life in the past. The excavations at Lullingstone helped archaeologists understand what life was like in this villa

The archaeologist has to make the best use of the available evidence. Some interpretations can be no more than intelligent guess work. For example, Colonel Meates suggested that room 25 at Lullingstone may, at one time, have been a servants' bedroom. The evidence for this was the two pits dug in the floor, each containing coins which Meates suggested could have resulted from two servants burying their money under their beds. This is a possible explanation but it may not be the only one or even the correct one.

Found at Lullingstone

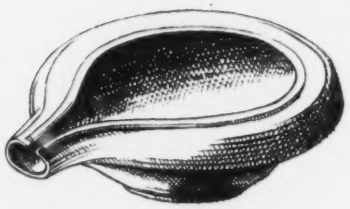
During the excavations at Lullingstone many objects were found which might have belonged to the owners of the villa or even the slaves, who probably owned a few simple things. Some of these objects are now on display in the British Museum, and some are on display at Lullingstone.

Hairpins were used to hold up hairstyles for women. Just as now, fashions changed throughout the Roman period. The complicated fashions of the first and second centuries required longer pins, which may have protruded a distance from the hair so that their carved and decorated heads could be seen. In the third and fourth centuries simpler hairstyles required shorter pins. Brooches were used for fastening tunics or dresses. Combs were often carved from bone or antler. Only one comb fragment was found at Lullingstone.



Pottery is often one of the most common finds on Roman sites. It was cheap to make and, apart from very fine pieces, when it broke or, in the case of food vessels, acquired too much of a 'taste', it was probably thrown away. If pottery is well fired it does not rot or degrade in the soil.

Amphorae were used for transporting wine, olive oil or fish sauce from the Mediterranean.



Mortaria - the pieces of grit included in the inside of the bowl above made it easier for the person preparing food to crush, grind or mash ingredients.

Fine pottery was the equivalent of our 'best china'. One type of fine ware called Samian ware has a characteristic reddish colour and sheen. It was made in France and Belgium and transported to places all over the Roman Empire in the first and second centuries.

Iron knives and bronze spoons, used for eating, were also found at Lullingstone. The design of these has hardly changed since Roman times.

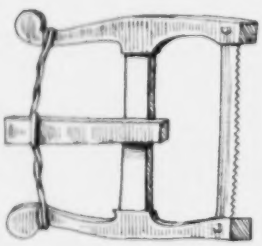
Glass found at Lullingstone had various uses, including windows. Glass bottles used for cosmetics were also found and, in the grave in the temple mausoleum, four glass bottles were found.

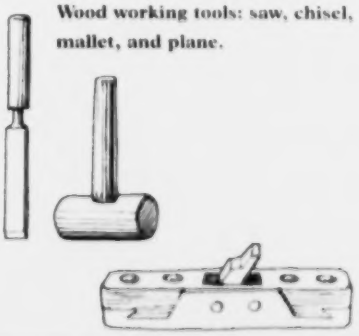
Among the everyday objects found at Lullingstone were iron styli (used for writing on wax tablets), keys and an oil lamp, bone needles, and spindle whorls for spinning wool or flax.

A variety of tools, which would have been used around the estate, were found. They include a hammer, anvil, drill bit, awl, gouge, and a chisel. The anvil could have been used on site by a blacksmith to make some of the structural fittings which were found, such as large staples, hinges and hooks.

Bronze hub-cap, decorated with the head of a lion, found in room 8.

Only a small number of agricultural implements were found, including pruning knives, shears, and possibly a hoe and ploughshare. Several fittings from carts and pieces of horse harness were also found which may relate to the farm, although the lion's head axle cap must have been from an important vehicle, not just a farm cart. Animals also left their mark. Paw prints have been preserved in tiles – animals could have walked over the tiles, moulded from clay and left to dry before firing.





Wood working tools: saw, chisel, mallet, and plane.

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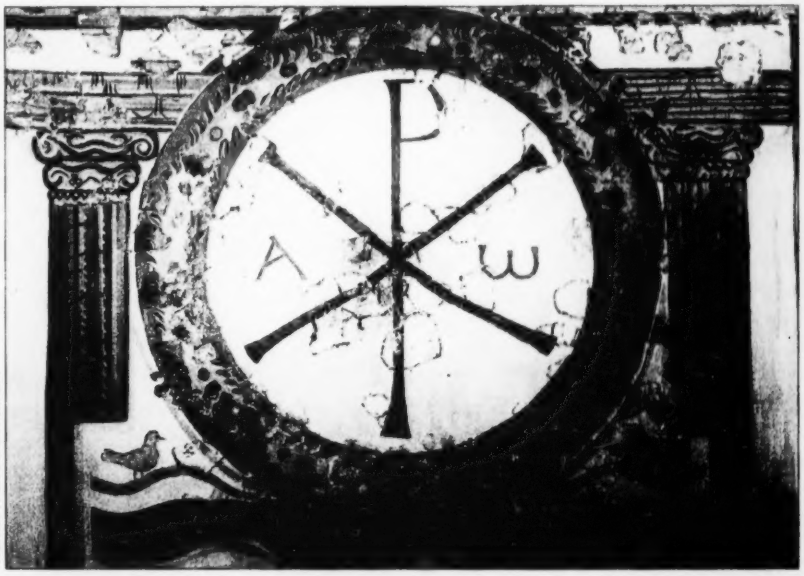
Religion and ritual

Religion was very much a part of everyday life in Roman Britain. Every villa like Lullingstone would have a small shrine where the statues of the household gods were kept. These were known as lares, and would be given regular offerings of food and drink. In return the lares were expected to look after the inhabitants of the house and make sure that they prospered. The two marble busts found in the cellar at Lullingstone may have been treated in the same way as lares.

In Britain as in other parts of the Empire, people were allowed to go on worshipping their pre-Roman gods. The nymphs in the wall painting at Lullingstone may have been water goddesses worshipped by the family in the house.

The most important gods to the Romans were: Jupiter (or Jove), the most powerful of the gods, frequently known for chasing young women, and represented in the mosaic in the dining room at Lullingstone; Juno, his wife, who was the protectress of marriage and of women and hunted down Jupiter's mistresses and their children, and is referred to in the inscription on the Lullingstone mosaic; and Minerva, the goddess of wisdom, the arts and trades.



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Reconstruction of painted wall plaster from the south wall of the chapel, showing symbols associated with early Christianity.

Burial

People were not normally buried inside a house or villa, but were usually buried nearby. At Lullingstone the bodies of two people in lead coffins were buried in the temple mausoleum. Richer people were buried with some of their possessions. Often these consisted of food and drink for their journey to the next life and favourite toys or games so that they would have things to do.

The young man's body in the temple mausoleum at Lullingstone was buried with two flagons (perhaps originally containing wine), four glass bottles, two glass bowls (perhaps containing food), two knives, two spoons and a wooden games board with 30 glass counters, 15 white and 15 red-brown.

Temples and shrines

The Romans also built temples dedicated to particular gods, although the Pantheon at Rome was dedicated to all the gods - in case any had been missed out and were angry at not having their own specific temple. The temple-mausoleum at Lullingstone was similar to those found in other parts of the Roman Empire. In ground plan they have the appearance of one square within another. The central area, or cella, probably rose above the roof of the surrounding portico. At Lullingstone there was also a small circular shrine. These circular shrines are also common and are built in a similar style to Iron Age houses – the houses most common before the Roman invasion.

Christianity

Christianity was not legalised in the Roman Empire until a new law was passed in AD 313. If the inhabitants of Lullingstone were Christians before this date they would have had to worship in secret. It can be difficult to discover when people become Christians. One clue can be burials without possessions - although this can just indicate a poor person or a body being hurriedly disposed of. The cross was not used as a symbol in the way that it is now and the symbol normally used by Christians was the 'chi-rho'. This looks like a letter P with a letter X superimposed. It is made up of the first two letters of the word Christ in the Greek alphabet. The finding of the 'chi-rho' symbol on the wall plaster at Lullingstone gave the clue to the existence of the Christian chapel.

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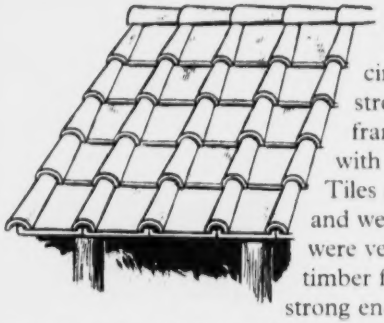
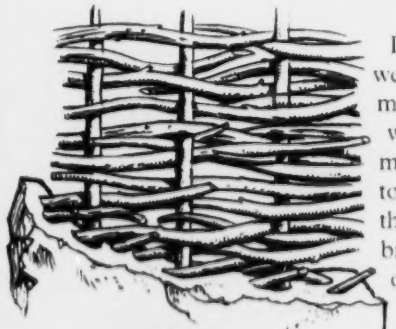
The Roman builders' handbook



Tiled roofs

In normal circumstances, a strong timber roof frame was covered with fired clay tiles. Tiles are long lasting and weatherproof. They were very heavy, so the timber frame had to be strong enough. There were two types of roof tile, tegulae (these are the flat tiles with ridges each side) and imbrices (the half round ones to cover the ridges). The roofs had to be set at a steep angle to enable the water to run off easily.

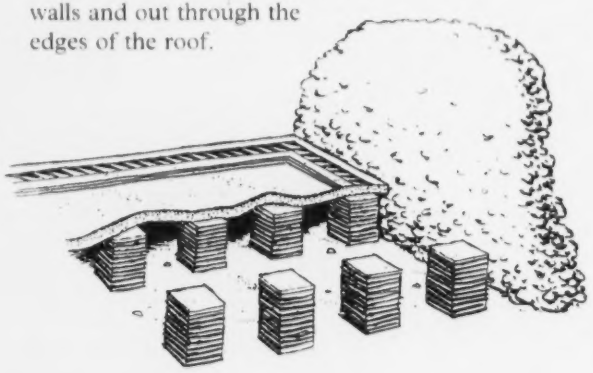


Inside walls

Inside walls were probably made of wattles, which were made by weaving together young, thin tree branches. Daub, or burnt clay, was then plastered over them to give a smooth finish. The rich would then have their walls painted with elaborate patterns, usually chosen from the artist's pattern book. Plain colours were less expensive.

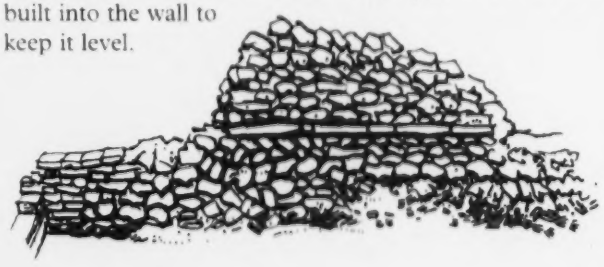
Floors, for central heating

For under-floor heating with hot air circulating from a furnace, the floor needed to be raised up on small pillars. They were usually made from large square, or round, tiles, or sometimes from stone. Box tiles carried the hot air through the walls and out through the edges of the roof.

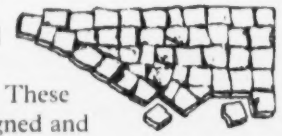


Outside walls

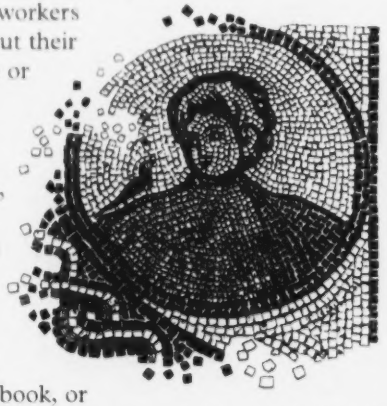
Stone was used for outside walls and walls which have to take some part in carrying the weight of the walls or the upstairs room. In areas where stone was in short supply, low foundation walls were built of stone and the rest was built from timber frames. At Lullingstone, where the only easily available stone was flint, which is difficult to build with, layers of tile were built into the wall to keep it level.



Mosaic floors



Mosaic was used as a superior kind of flooring for important rooms. These were usually designed and laid by a specialist. The mosaic workers would cut their own tile or stone cubes, called tesserae, on site. Designs were often chosen from a pattern book, or sometimes, for the very rich, were designed specially. Plain tiled floor were a lot cheaper.



Wooden floors

Wooden floors were used for storage or cellar areas. Sometimes clay or gravel, rammed down hard, were used as an alternative. If a hardwearing, waterproof floor was needed, in baths for instance, a material called opus signium was used. This was made by mixing crushed pink tile into concrete.

Windows

The rich would be able to afford glass in some of their windows, as at Lullingstone. Otherwise the opening would have been closed with simple wooden shutters.

Mosaics

The most important rooms in a villa – the rooms which were used for entertaining guests – often had floors decorated with pictures made from small fragments of stone and tile.

Some mosaics consisted simply of patterns and these are called geometric mosaics. Others contain pictures, often of scenes from Greek or Roman mythology. The small pieces of mosaic were cut, using hammer and chisel, from different coloured stones and tiles.

Popular patterns for mosaics were waves and intertwining designs.

Because they were cut, individually by hand, they are never perfectly square and if you look carefully at a mosaic you can see that the small pieces, or tesserae, are slightly irregular.

The panels of the fine mosaics at Lullingstone appear to have been laid directly, one tessera at a time, into a bed of wet lime mortar. The craftsmen who did the work would have used a template for positioning them and for marking particular important points in the pattern. Rulers, T-squares and compasses would also have been used. It was difficult to produce elaborate patterns using this technique since the mortar of the mosaic bed hardened quickly and there was little time for positioning and adjusting the tesserae.

Some mosaics were prefabricated and laid as sheets. Complicated designs could be created to a pre-drawn pattern and a piece of linen cloth then stuck with glue (made from animal bones) across the upper face of the tesserae. When the glue had set the whole sheet could be lifted, taken to the site and positioned in a freshly prepared bed of wet mortar. Once the concrete had set the linen could be removed by dissolving the glue with hot water.

The tesserae of the mosaic in the audience chamber at Lullingstone are made of a variety of different materials, including fragments of blue fired clay from the core of tiles, marble (probably imported from abroad) and local stone ranging in colour from purple to nearly black. After laying, the whole mosaic was washed over with watery pink mortar as grout. This sealed the joints, making the floor waterproof so that the mosaic could be washed over for cleaning.

The mosaics at Lullingstone both relate to Greek mythology.

Audience chamber

The central mosaic in the audience chamber shows Bellerophon astride the winged horse, Pegasus, killing the Chimaera, (a legendary fire-breathing monster). The panel in the audience chamber also contains two dolphins and two open seashells, and the scene is edged with a geometric pattern. Around the scene are three motifs, illustrating the seasons. Spring is shown with a swallow on her right shoulder, and winter with a hood. It is thought that the ears of corn in the third surviving mosiac may represent summer, but experts disagree whether it is autumn which is missing, or summer.

Dining room

The central panel in the mosaic in the dining room shows another scene adapted from a Greek myth. The god Jupiter, diguised as a bull, is swimming across the sea with Europa (with whom he is in love) on his back. There are also two cupids in the picture. One is holding a lighted torch and encouraging the bull. The other is restraining him by holding his tail.

The inscription translates as 'If jealous Juno had seen the white bull swimming like this she would have had greater reason for going to the god of the Winds.' It refers to an incident in the Latin poem, the Aeneid, by Virgil.

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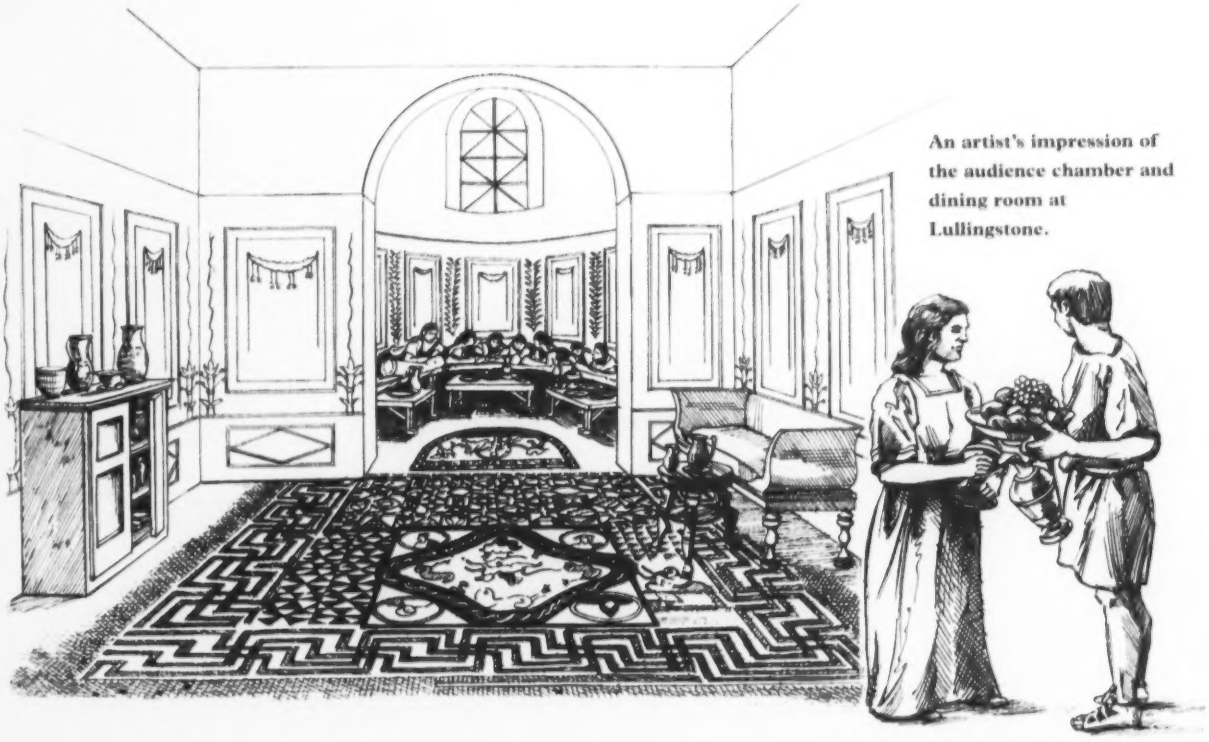
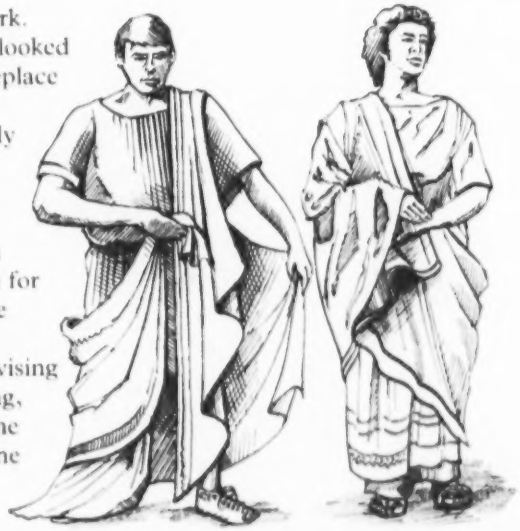
Life in the villa



An artist's impression of the audience chamber and dining room at Lullingstone.

The owners of the villa were probably very Romanised and followed a way of life that would have been instantly recognisable to the occupants of a villa in Italy. They would have probably had several slaves to help in the day to day running of the house and estate, carrying out very specialised tasks. For example, there would probably have been a lady's maid, a cook, a housekeeper and a laundress, as well as those who maintained the house. There would also have been slaves who worked on the estate doing such tasks as making wattles for fencing, making beehives and repairing tools as well as the outdoor farming work. Slaves were generally well looked after as it cost money to replace them.

The owner would probably have risen early to go round the estate with his farm manager or bailiff, probably a free man, not a slave, who was responsible for all aspects of managing the farm - buying and selling crops and livestock, supervising the work of slaves, planning, keeping the accounts. In the afternoon he may have gone hunting with friends or neighbours.



The man is just fixing his toga and the woman is wearing a large shawl (called a palla) over her long tunic (a stola).

Different types of leather sandals.

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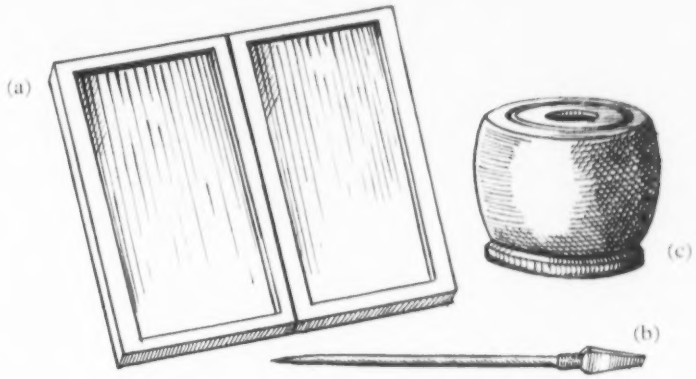


Writing equipment: a wooden tablet filled with wax (a) on which letters and numbers could be scratched using a stylus (b). Writing was also done with pens and ink (c is an inkpot) onto very thin sheets of wood.

Three-legged table

The owner's wife would have focused on the efficient running of the house. In the afternoon she might have spent time with her children, hearing their lessons.

Yorkshire Museum

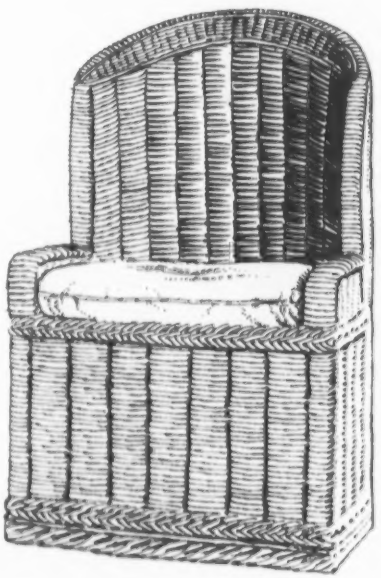
Tombstone of Julia Brica.

The traditional Roman clothing for men was the toga. It consisted of an oval-shaped piece of cloth about 6m long and 2m wide. It was a difficult garment to drape correctly and needed a second person to assist with putting it on, often a slave trained in toga arrangement. However the toga was better suited to the climate of the Mediterranean, and for everyday, in Britain, men generally wore a knee-length tunic with sleeves, and, if it was cold, two or more tunics. These could be covered with a cloak, sometimes with a hood. Feminalia or knee breeches would have been worn in cold weather, or for riding, by even the most Romanised of Romano-Britons.

Women may have worn briefs (like a bikini) and a band of linen wrapped around the bust. They then wore an under-tunic and a tunic. Married women wore longer, fuller tunics than unmarried women.

There is some evidence for socks and stockings. A double-ended knitting needle, like a modern sock needle, was found at Lullingstone.

Couches were usually made of wood. They might have been upholstered or have had rugs and cushions to make them comfortable. Chairs might either



Basketwork chair

have been made of basket work, with a rounded back, or may have been simply made out of wood, with a straight back. Decorative tables probably had three legs carved with animal feet and heads. In the kitchen there must have been a simple rectangular table for preparing food. We have not found any of the furniture that was used at Lullingstone, so we have to base our ideas on paintings and other Roman sites.

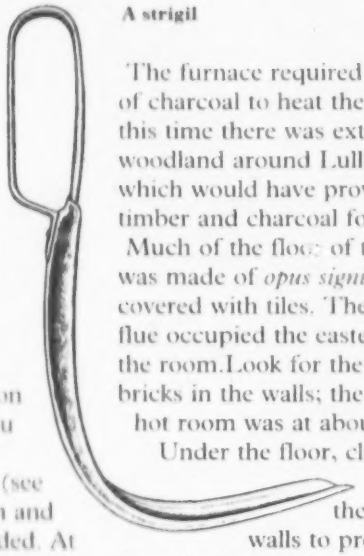
Taking a bath at Lullingstone

An artist's impression of the baths at Lullingstone Roman Villa.

Taking a bath was a popular leisure activity. Bath houses have been found in Roman forts, villas and towns.

The rich owners of Lullingstone may have been in the habit of bathing every day, probably in the late afternoon or early evening. Honoured guests would have been invited to take a bath with the owner. Wherever you were in the Roman Empire a bath followed the same basic procedure, although there were variations depending on climate and on how rich you were.

In the late second century (see page 5) the recreation room and a cold plunge bath were added. At first this was deep enough to swim in, but over the years it was relined to stop leaks, and by the mid-fourth century it was too shallow for comfortable swimming. Drains allowed the water in the plunge baths to be changed.



A strigil

The furnace required a great deal of charcoal to heat the baths. At this time there was extensive woodland around Lullingstone which would have provided timber and charcoal for fuel.

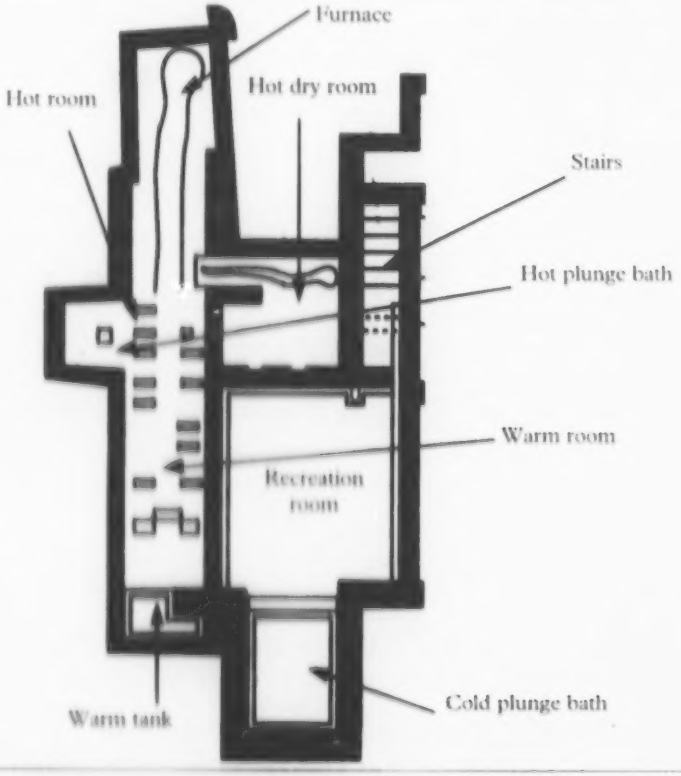
Much of the floor of the baths was made of *opus signinum* covered with tiles. The vertical flue occupied the eastern end of the room. Look for the layer of bricks in the walls; the floor of the hot room was at about this level.

Under the floor, clay was built up along the sides of the walls to protect them from the heat and to direct the heat into the flues or hollow channels that ran inside the walls. The walls and floors held the heat.

From the west verandah, tiled steps led down to the baths. The bathers probably got changed in the cold room, and then moved to the warm or tepid room.

They would then move on to the hot room for a good sweat. A slave would rub oil onto the bathers and then scrape it off with a blunt knife or strigil, leaving the skin clean. The Romans rarely used soap.

The bathers would then use the hot bath and return through the warm room to the cold room for a plunge in the water tank. Finally, probably in the warm room, a slave would anoint the bather with oils and perfumes.



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Educational approaches

This chapter suggests some ideas for activities during your site visit togther with ideas for preparation and appropriate follow-up. You are welcome to photocopy the activity sheets for use with your group, but you are strongly recommended to visit the site to try them out first yourself in case you need to adapt them for your pupils. The resource sheets are also intended for photocopying, if the language level is appropriate for your pupils. You will also need to decide whether to bring any equipment with you on you visit. For instance, compasses will be very useful, both inside the cover building and outside in the surroundings of the villa.

At the site your pupils should work in groups, each with an adult who may have to give a lot of guidance and will need to be well briefed. Adults who are not teachers may need to be encouraged to answer children's questions with questions rather than supplying answers. Try to have a short session with your helpers to introduce the aims of the visit and the essential historical background.

Building techniques

Lullingstone is an excellent site for examining building techniques used by the Romans and for finding out about some basic principles of building technology which remain important today. The Roman builder activity sheet can be used on site, in conjunction with resource sheet 4, to investigate the archaeological remains. There are a number of other simple exercises some of which can be carried out at the site and some as preparation or follow up work.

The basic principle used in building a villa such as Lullingstone is the same as that still used to build a house today - strong main outer walls are proof against the elements and carry the weight of any upper storey and of the roof.

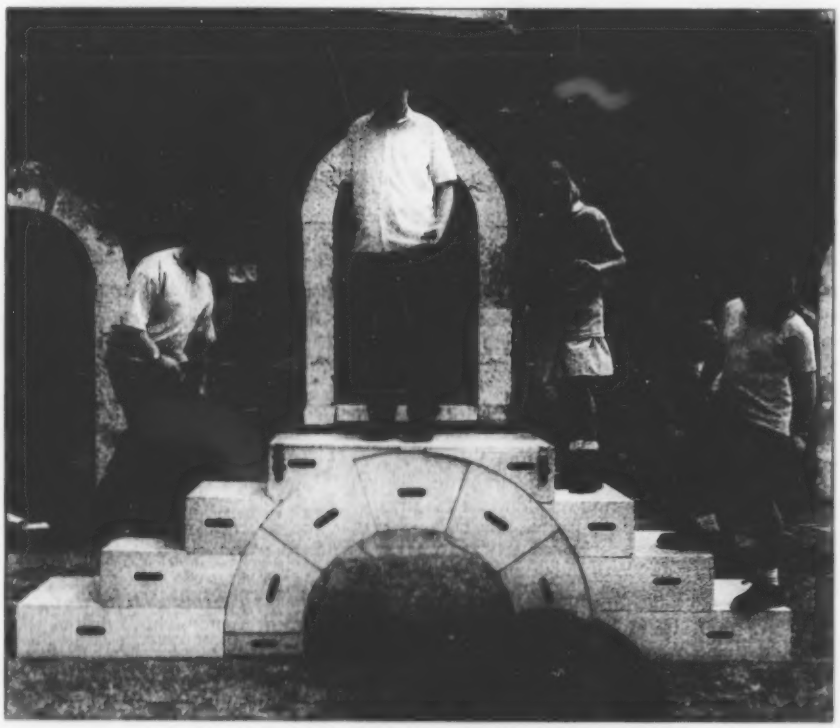
Materials

Ask pupils to walk round the site looking for and writing down any Roman materials they can see used and any modern materials used. Then, in groups, they can discuss the purposes the materials were used for, and which materials were used both in Roman times and now.

Arches and lintels

Using building blocks ask pupils to build a block wall with a window in it and then discuss how they build the wall above the window opening. They will have had to use some sort of lintel arrangement. You may be able to demonstrate practically using a weak lintel (e.g.a lolly stick) and applying weight to it how it will crack if overloaded. You can then get your pupils to experience the strength of an arch as an alternative solution to the problem. You will need about twelve to fifteen pupils and the same number of reasonably strong cardboard boxes (you can probably get them from a wine shop or supermarket and you may need to secure the lids with sticky tape).

Arrange about eight to ten pupils in a line, with the tallest in the middle ranging down to the smallest at each end of the line. Ask each pupil to hold a box above his/her head, holding the box back and front rather than at the sides. Then you need another two pupils at each end of the line to begin pushing the boxes in towards the centre. As the pressure increases the pupils in the centre of the line can begin to let go of their boxes and stand out of the way. Finally two or three pupils will be required pushing inwards at each end and, with luck, the 'arch' will stand up on its own. It will, however, be rather flatter than a true Roman round headed arch as you can see in the hypocaust (room 2) at Lullingstone. If appropriate you can investigate as a science/technology problem why you have to push in to hold the arch up and what the implications are for the distribution of load. The round-headed arch is one of the most characteristic features of Roman architecture and, without its use, many Roman buildings could not have stood up.



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Round arches are characteristic of Roman architecture.

How we think the kitchen at Lullingstone may have looked.

Everyday life at Lullingstone

It can be very difficult for children to imagine what an archaeological site looked like when it was lived in and people were going about their daily business. In this handbook there are a number of activities and resources which will help you concentrate pupils on what life was like at Lullingstone for the owners, their families, guests and slaves. These include the resource sheet on daily life and the *Then and Now* activity sheet. Use of these approaches will help pupils see Lullingstone in the light of their own homes, as a house which was lived in by an ordinary family – albeit quite a rich one.

The *Then and Now* activity is designed for young pupils who may be on their first visit to an archaeological site, and encourages them to look at similarity and difference through comparing a Roman villa with their own homes. The activity sheet can be started at school. Ask pupils to fill in information about their own homes and, in the process, learn how to use the sheet.

Before the visit you will need to introduce the work of the archaeologist and your pupils will also need to know a little about villas, Roman baths and mosaics. One preparation idea is to ask children to write a description of what they do when they get up in the morning and compare it with the description of Livia getting up on page 11.

Back at school pupils could:

- role play a conversation between a Roman child and a child of today comparing life then and now
- share their findings through a class assembly
- as a class produce a large scale plan of the site – if you have a large wall in the classroom or a corridor a plan at 1:10 would take up an area approx. 3.4m long by 2.2m high. On to this plan you could attach

Activity – weaving

Back at school you may like your pupils to work on a Roman craft, such as weaving.

Large upright looms were used for weaving cloth in Roman times. A considerable amount of labour and skill is required to build one of these looms. A simpler approach is to make a decorative braid. To do this you will need to make a simple heddle, as the Romans did. The drawing here is based on a heddle found at the Roman fort of South Shields near Hadrian's Wall. This heddle, if traced onto and cut out from cardboard (cut out six holes and five slots) can be used for weaving a band with 11 warp threads. These bands were used in Roman times to decorate other woven textiles, but could also be used to make headbands or belts.

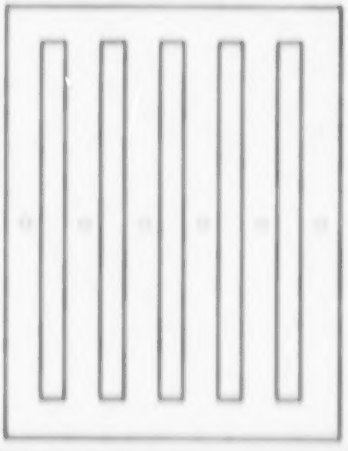
Instructions

Tie the 11 threads (about 90 cms long) to a convenient fixed point (like the leg of a desk). Using a variety of colours of warp threads will give an attractive end result. Thread alternate threads through the slots and holes of the heddle. Tie the loose ends of the threads to a belt or band around your waist. Starting from the end tied to the desk, weave five or six rows of weft going under one warp thread and over the next. This should have stabilised the weave and you can now use the heddle to speed up the weaving.

Lean back gently to tauten the warp threads, lift the heddle to create a gap (the shed) between alternate warp threads and push the weft through the shed.

Then push the heddle down to create the opposite shed and again push the weft through.

Continue weaving in this way until your braid is the required length, pushing the weft threads up against each other using a stick or pencil. Tie off the warp threads at each end.



Activity – playing tabula

Pupils could make and play their own game of tabula, a game that would have been played by children at Lullingstone.

The layout of the tabula board can be copied onto card or a piece of hardboard. The original counters were round, with a slightly domed shape, and were about 20mm in diameter and about 7mm thick. Replicas could be made from clay and glazed to look like the originals, or counters could be cut from cardboard.

Rules for playing tabula

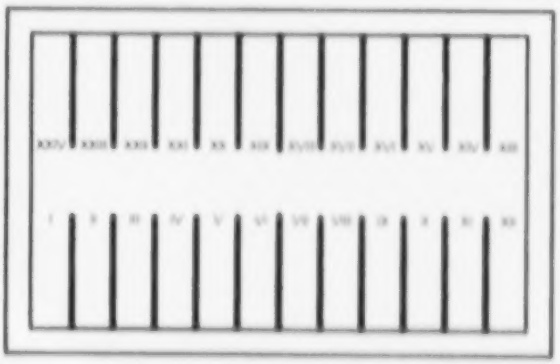
Each player has 15 counters and the aim is to move them round the board quicker than the opposition. Players start with their pieces off the board and move anti-clockwise from 1 to 24.

The players take it in turns to throw three dice. If the first player, for example, throws 1, 3 and 5 then either three pieces can be moved, 1 point, 3 points and 5 points, as long as none of the three resting places is blocked by an opponents piece, or one or two pieces can be moved using a combination of numbers thrown on the dice. For example, two pieces could move 8 points and 1 point or one piece could move 9 points, as long as none of the resting places is blocked by an opponent's piece.

If a player moves onto a point held by a single one of the opponent's counters then his counter is thrown off the board and has to begin again at point 1. No other of this player's pieces can be moved until this counter is back on the board.

If a player has two or more pieces on a point then these pieces cannot be captured and none of the opponent's counters can land on this point.

A player must use the whole of his or her throw if possible, even if this means creating a weak point with only one counter on it.



(From R.C. Bell *Board and table games from many civilisations*, see *Bibliography and resources*.)

Before their visit, pupils could devise their own musem display, on life in Britain today, by choosing six household objects which they think best illustrates the theme. They should write a short caption for each article chosen. When they are at Lullingstone, they should look for any examples in the display of articles similar to those they had identified.

Religion

Lullingstone provides an excellent site for investigating pagan and Christian religion in the Roman Empire. Opportunities exist to study the different ways in which religion was practised. Some of the ideas which could be developed include looking at why the owner of the villa might have worshipped water spirits (water was important not only for the crops, but for drinking by livestock and humans, for the baths, as a means of transport, for powering water mills (for grinding corn) and possibly also for fulling mills for making felt. Pupils might take the role of one of the early Christians worshipping in the chapel (in Brian Davison's *A Place in the Country*, the first Christian owners of the villa are called Tetradius and Helena). Encourage them to put themselves in the role of one of these two and describe what they thought about the 'pagan' evidence around their home.

Playing tabula

pupils' work relating to that area of the villa – both creative work and historical enquiry and evidence. If the children are involved in producing the plan this helps develop their understanding of scale.

■ build a model to further their understanding of archaeological remains.

When you are on site encourage children to look for evidence about life in the villa from the remains themselves and from the finds on display around the site. The resource sheet on finds will give you some idea of the sort of objects which were found during the excavations. You could produce a finds worksheet, listing a selection of the objects found and on display (including photocopied illustrations from this guide) asking pupils to find this object in the display and then write down where in the villa they think this object might have been used and what the presence of this object tells us about life in the villa.

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Making an archaeological section

In order to gain a clearer idea of how archaeological layers build up, and what a section cut through them looks like, it is possible to create an archaeological section.

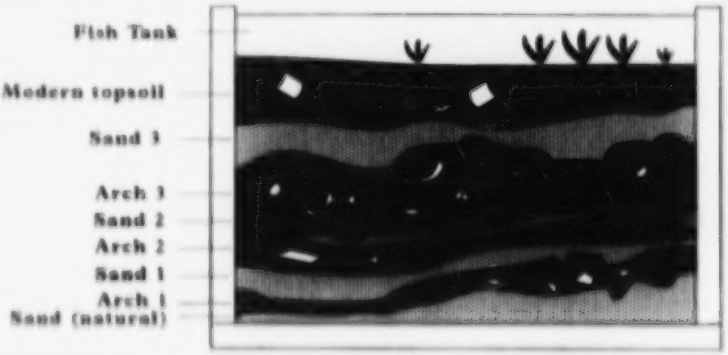
You will need:
an old fish tank
building sand
topsoil or potting compost
broken pottery (a plant pot will do)
small bones, such as chicken bones
charcoal
stones
broken brick.

In the bottom of the fish tank put a layer to represent natural ground. You could use sand to represent yellow clay. On top of this make the layers representing archaeological deposits. There could be several layers of soil (separated by thin layers of contrasting sand, containing pieces of charcoal, broken brick and broken plant pot. These pieces should be placed against the glass of the fish tank so that they can be seen.On top of these archaeological layers, put a thick layer of sand followed by a thick layer of topsoil or compost, to represent modern topsoil.

Layers 1, 2 and 3 are the archaeological layers containing the remains of three phases of human occupation. These layers are separated by three layers of sand which have blown across the site. Finally this hypothetical site was overgrown by plant life forming a soil on top of the site.

When the section has been completed, your pupils can make a scale drawing of it:

- grid the front glass of the fish tank, by taping horizontal and vertical pieces of string across it
- decide on an appropriate scale, probably 1:5
- ask pupils to produce an accurate scale drawing, marking all the detail, including objects visible and colour of each layer
- ask pupils to label each feature carefully, giving as much detail as they can from their observation.



Pupils could be asked to draw a picture of themselves, prepared for burial, with their favourite objects - those which they would wish to be buried with. This could provide the basis for discussing the Roman view of the afterlife, particularly in terms of the choice of grave goods and comparing it with views of the afterlife in other major religions.

Archaeology

In the documentary section and archaeology resource sheet you will find information about how Lullingstone disappeared from view and how it was discovered. Nowadays archaeologists would be unlikely to excavate an undisturbed site like this unless it was threatened by development such as forestry, a new road or sewer, or a building with deep foundations.

You may wish to investigate archaeological processes, by trying some simple excavation activity, in the grounds of your school. Mark out a small area of one or two carefully selected square metres,(choose your place carefully, and consult with service providers and local archaeology units if necessary). Ask your pupils to carefully remove layers of soil, recording any objects they find by using a planning frame (a wooden frame one metre square, with strings fixed every ten centimetres across and down) and plotting their finds on to squared paper.

Over recent years television has played a major part in increasing public interest in archaeology. Many people now want to visit the well-known archaeological sites and this can cause a conflict between the need to cater for public enjoyment and education and the need to preserve the archaeological remains. Your pupils could present arguments for and against uncovering and displaying to visitors the parts of Lullingstone that are not at present shown - the chapel and mausoleum. Their arguments could be presented in an oral form, perhaps by staging a public debate, or in written form, with pupils composing letters to English Heritage or the local newspaper on the topic.

Presenting the site to visitors

There are many ways in which an organisation such as English Heritage tries to interpret or present sites for its visitors. The aim of such presentation is to give visitors, who have many varied backgrounds and needs, enough information for them to be able to understand how the site worked in the past, and how the previous inhabitants might have lived. This might be done by means of a guidebook, or by information panels, or a short video, or an audio-tour to accompany visitors as they go round the site. Some sites are able to offer guided tour to groups or individuals.

Visitors to Lullingstone

The number of visitors to Lullingstone Roman Villa has remained fairly stable over the past five years, at around 50,000 per year.
1997/8 47,784 including 17,670 educational visitors
1996/7 48,813 including 18,195 educational visitors
1995/6 46,969 including 19,754 educational visitors
1994/5 48,862 including 19,295 educational visitors
1993/4 52,629 including 19,889 educational visitors

In all cases decisions have to be made about what level of detail to include, what information will have to be omitted, and how to make complicated ideas accessible to the general visitor or to children. Lullingstone is a particularly difficult site to explain, because of its many phases of development.

One way to focus the site visit is for pupils to think about how they would present Lullingstone to other visitors. The activity sheet *Lullingstone on display* is intended to be used for this purpose.

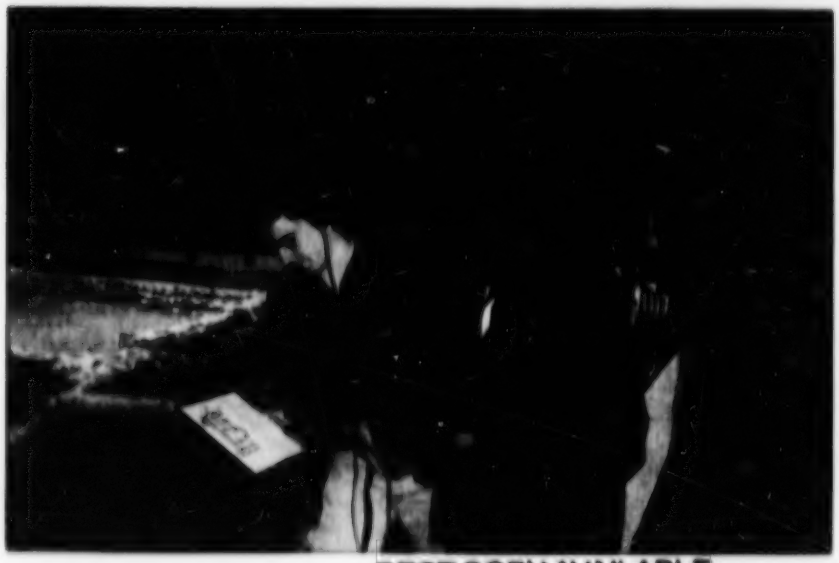
As preparation, ask you pupils to think about visits made to other sites or museums, either with their families or as part of a school visit. They could work in small groups of five or six, and report back on their discussions to the rest of the class. Can they remember using a guide book, or reading information panels? Did they watch a video, use an audio tour or have a guided tour? Which approaches did they enjoy most? Which did they feel gave them the most information? Did other members of their family agree with them? Can they think of some groups of visitors for whom some interpretation might not be suitable?

During the visit to Lullingstone, use the activity sheet *Lullingstone on display*, which asks pupils to consider several different interpretation techniques which could be employed at the site. Encourage pupils to look at all aspects of the suggestions. For instance some, such as video, will be more expensive than others, yet may not benefit all visitors. Others, such as the display of original objects, may have security implications. When you get back to school, ask pupils, again working in groups, to present their proposals to the site managers, (the rest of the class): what would they recommend for Lullingstone?

This sort of approach can be given a more specifically historical focus, by asking pupils, after a visit, to devise a story board for a short video about Lullingstone. They should be given a specific audience to aim the video at – for example younger children, class mates, a group of people from another part of the country who think they might want to visit Lullingstone but want to know more about it. You could also specify the main theme of the video to be produced. For instance, you could ask for it to focus on the daily life of the inhabitants of the villa at a particular time, perhaps from the point of view of children which may have lived there, or on the uses of the different rooms which can be seen at Lullingstone.

Older students following courses with a specific tourism element could explore how the site would cope if it became extremely popular with visitors. Some of the things to investigate are:

- physical damage to the site from the vibration of people walking around it – this could affect both the archaeological remains and the modern building
- access to the site – how many cars an hour can the road from Eynsford cope with
- car parking – is it adequate? How long do people stay on site? Do they use the car park for a longer period than their visit to the villa?
- toilets – can they cope with increased use?
- shop and refreshments – are these adequate?
- will there be any overcrowding at particular points in the site?



Visitor using the audio tour.

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Lullingstone across the curriculum

History

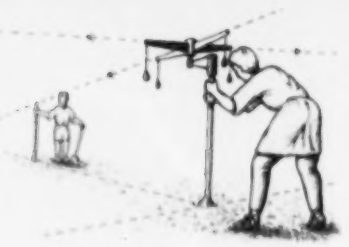
Lullingstone is a key site in the understanding of social, economic and religious life in Roman Britain and a visit will be relevant to the Roman sections for Key Stage 2

and the sections on the classical world for Key Stage 3. It also provides an excellent site to study change over a long period of time – the development of the villa over 350 years is well recorded. Pupils can clearly see that change took place within the Roman period. It provides a good opportunity to consider archaeological as well as historical evidence and to look at how the two types of evidence can be used together. At Lullingstone the historical sources only give general or comparative evidence, for example Pliny's description of his Italian villa, and the specific evidence is all archaeological. Lullingstone can also be used to study how archaeological sites are interpreted to the public today and how the approach to the interpretation and preservation of archaeological sites has changed over the fifty years since excavations began at Lullingstone.

English

Site visits generate ample opportunities for speaking and listening. Pupils can be encouraged to develop and express a point of view on the various interpretations of the archaeological evidence. Writing reports, producing guide books, designing information panels, giving guided tours, writing commentaries for audio tours, all use different types of language. Classes might develop drama and role play as a result of the visit based perhaps on the events surrounding the final fire that destroyed villa, on the tragedy (or tragedies) that led to the death of the two young people buried in the mausoleum, on the stories of the myths in the mosaics, or on the theme of the seasons represented in the mosaics.

The atmosphere of the site could stimulate creative work, perhaps picking on the theme of water, clearly so important with the well, the bath house, the river, the water nymphs, the spring in the cellar. You could study a number of poems about water and the pupils could then begin to write their own Lullingstone water poems. The names of the possible inhabitants of



Using a groma. Roman surveyors used a groma to mark out straight lines and right angles. It consisted of a pole with a pivoted right-angle extension at the top. Each arm had a plumb bob.

the villa used in Brian Davison's *A place in the country* could also form the basis for writing stories about family life in the villa.

Maths

Both archaeologists and Roman builders needed mathematical skills to do their work. The archaeologist draws accurate plans using measuring tapes to record features and plotting finds on to plans by means of triangulation (measuring from two fixed points). The Roman builder used a groma to lay out sites, and set squares were used to create right angles. Shape and symmetry are also topics which can be explored. The villa, for most of its life, had a basically symmetrical plan with the axis of symmetry passing through the principal rooms. The geometric mosaic on the reception room floor can also be used for studying shapes.

Geography

Pupils coming to the site will need to be able to orientate themselves and to interpret plans, not least because the site itself, largely made up from wall footings, is shown in plan form. One of the most interesting geographical studies is to consider land use and sphere of influence looking at distribution of villas up the Darent Valley from Dartford, (see page 4). This reflected the need for each estate to have access to varied resources – riverside meadows, woodland, water for power and transport, upland grazing. The choice of site, local routes and the availability of raw materials are all relevant to the geography curriculum.

Technology

The technology curriculum stresses the importance of looking for design solutions to problems in other times and places.A study of the built remains is very relevant to this, looking at issues such as the use of string courses in the walls, use of arches, different flooring materials, circulation of hot air for heating, water supply, even how to lay a complex mosaic without the mortar into which the tesserae are being placed setting before you have finished. In its modern context the site also raises questions such as how to display a two thousand year old site and simultaneously protect it from destruction, and how best to inform visitors about what they can see.

Science

An archaeological site tells us much about the properties of different materials. Pupils can look at the choice of building materials and relate that choice to their function. The survival of some materials and the decay of others over time and in certain conditions is highly significant to an archaeologist and could stimulate experimental work back at school. Examination of the evidence for crops and livestock could lead to study of the processes of natural selection and deliberate breeding.

Art

The imagery of Roman art as shown in the wall paintings and mosaics could lead to a wider investigation of classical imagery, and to consideration of the limitations imposed by the materials used. Practical work could develop from a study of the mosaics, the building material or the whole complex and might be developed back at school into prints. The limited colour range at the site could encourage work on tone. The repeating patterns such as the Greek key could

Making mosaics

To recreate part of a mosaic floor, suitable tesserae can be made from ceramic tiles, often obtained cheaply from tile discount shops. Tile should be cut, using a tile cutter, into small squares (2cm square is a good size) A frame for the mosaic can be made from a piece of hardboard with rectangular wooden beading stuck around the edge.

Ask your pupils to design a pattern for the mosaic using 1cm squared paper. The design should be a little smaller than the area to be filled, to allow for inaccuracies in cutting the tiles, and the small gaps which will be left between them. The colours for the design should be marked on to the paper. The mosaics at Lullingstone will provide a good starting point for design ideas.

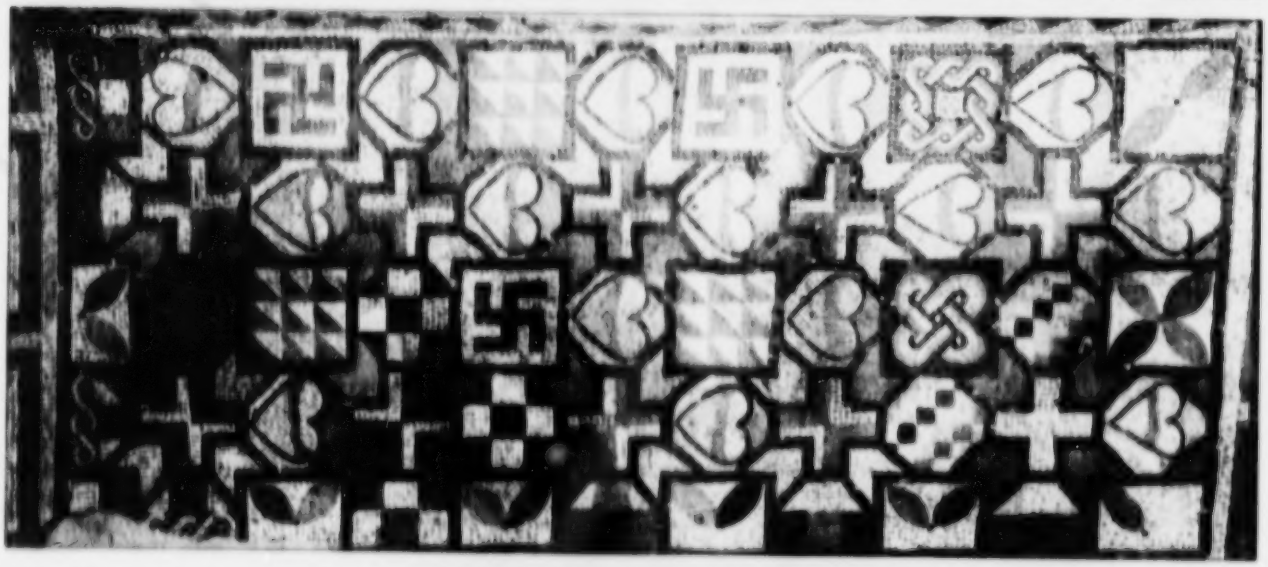
Next, smooth a layer of concrete (3:1 mix of sand to cement, mixed with just enough water to make it sticky) into the frame. If you prefer you can use plaster.

When the concrete has set, pupils can transfer their design to it, scribing through the paper with a blunt nail or old screwdriver.

Then, using tile adhesive, pupils can stick the tesserae on to the base, following their design. It is best to work outwards from the centre.

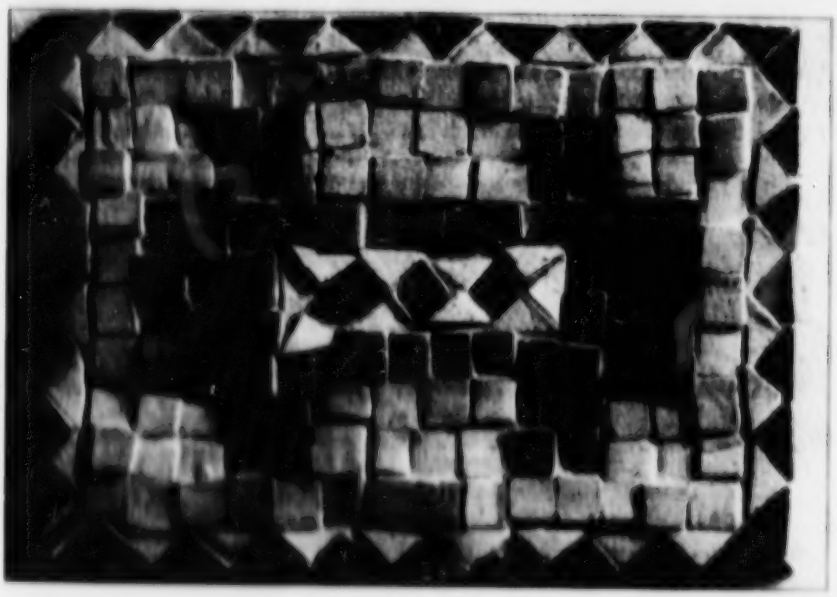
As a finishing touch, the mosaic can be grouted, used a proprietary grout, to fill in the gaps between the tesserae.

An impression of a mosaic effect can also be created by using small squares of gummed paper, and sticking these onto a previously marked out design on sheets of large paper or card. Attractive friezes, developed from Roman



Mosaic in the audience chamber at Lullingstone.

be used for creating fabrics or borders. Some of the incidents from the history of the villa would form emotive subjects for creative work. You could use the mosaics as inspiration for students to design their own book of mosaic patterns for potential clients or you could make mosaics, cutting coloured card into squares for the tesserae. Mosaics are still a popular form of decoration and a visit to a local town may well reveal some modern mosaics.



Mosaic made by pupils.

Archaeology training sheet

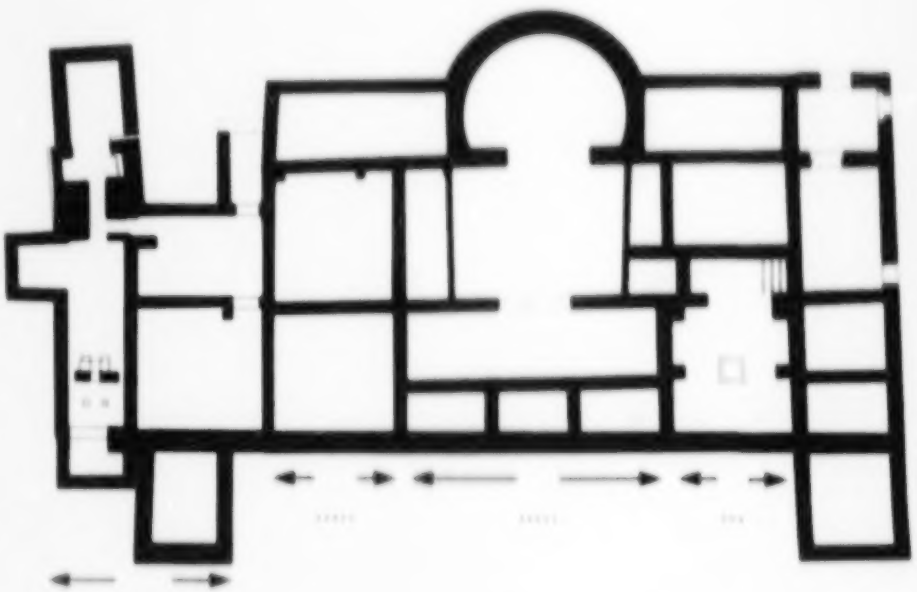
This activity sheet will show you what it is like to be an archaeologist. You will have to observe, draw and measure very carefully.

1 Start by writing down some of your first impressions of Lullingstone Roman Villa

2 Below is a plan of the villa. Mark on it:
the entrance where you came in
the place you are standing now
the north, south, east and west sides of the villa (use a compass)

3 Walk along the walkway on the east side of the villa and count how many times one of your feet (with shoes on) goes into each of the rooms. Write down the number next to the room on the plan above. Now you have a measurement, in units of your shoe, of the length and width of some of the rooms in the villa. (When you get back to school you can measure your foot, and work out how big the rooms are in metres and mark this on the plan too.)

4 On the right is a drawing of one half of the arch through the wall between rooms 2 and 3. Stand on the walkway along the east side of the villa and look at this arch. Notice how each stone has been drawn individually. Now draw in the other side of the arch.



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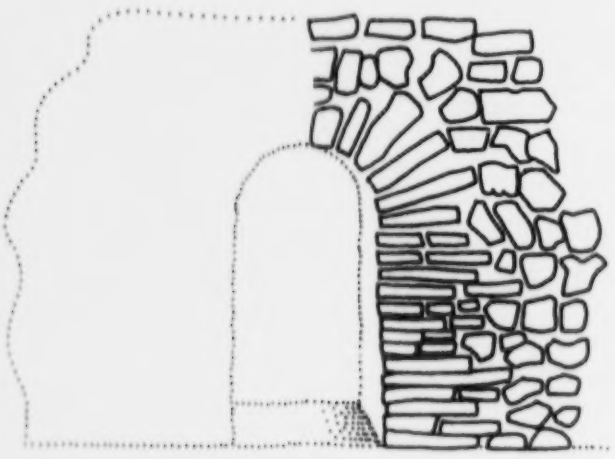
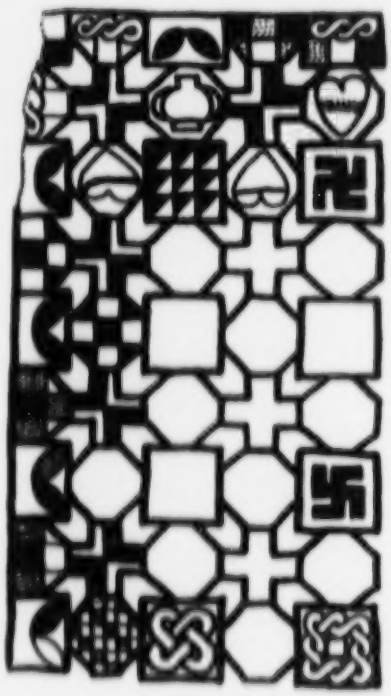


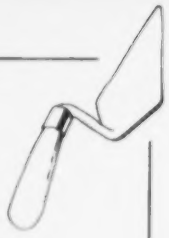
The arch was put there so that hot air could move under the floor of rooms 2 and 3. What sort of rooms might have had this sort of heating and why? There are many possible answers to the use of rooms 2 and 3, and, as often in archaeology, nobody knows the real answer.

5 Look at the flints used to build the walls of the villa. Put circles round words you think best describe them.

rough
smooth
square
lumpy
uneven
irregular
round
dull
rectangular
carved
shiny



6 Do you think these stones would have been easy or hard to build with? Why?



7 What other building material can you see that has been used?

8 What might also have been used for building that has since rotted away?

9 When the villa burnt down shortly after AD 400, burning wood fell across one of the mosaics. Look carefully and draw a sketch of the mosaic showing where you think the wood fell.

10 You should by now have learnt quite a lot about Lullingstone, and also about the way an archaeologist works. Look back to your first impressions of the site. Do you still agree with it?

Is there anything you would like to add?

Activity Sheet 2

Lullingstone on display

Congratulations! Your company, *Brilliant Solutions*, has been awarded a contract to prepare plans for new visitor displays at Lullingstone.

You could use any of the following:

- enhanced lighting
- replica objects for visitors to handle
- virtual reality programmes
- reconstruction of the building (or parts of it) on the original foundations
- reconstruction of the building not on the original foundations
- life sized models in Roman costume
- headset with taped description of area in Roman times
- video showing life on site
- display boards with photographs and information
- display cases with real objects
- smells and sounds
- models of the villa or parts of it

Using the plan, choose two areas of the site listed below and decide what additions from the above list you would make so that these areas were more interesting to visitors. What would you hope to make visitors understand that they didn't know before?

Dining room and audience chamber (rooms 22 & 23)

Christian chapel and cellar (rooms 4 & 5)

Heated rooms (rooms 1,2,3)

Bath house (rooms 10-17)

Kitchen (room 8)

Take into account the effect on the site and archaeological remains, on the work of the custodian and maintenance staff, on the different sorts of visitors to Lullingstone (e.g. school groups, families, older people, visitors with special needs).

Area 1 _____

I would add

I would want visitors to understand

Area 2 _____

I would add

I would want visitors to understand

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Pagan or Christian?

The year is AD 385, and you have been sent from Rome as a representative of the emperor, to find out whether the family that lives in the villa at the time is pagan or Christian.
You will be writing a report for the emperor, and he will expect evidence to back up your conclusions. Take care - the villa has been lived in for hundreds of years, and things might have changed during that time

Explore the site, using the plan, looking carefully for any clues to religion. Use the following points to help you write your report when you return to school.

When you arrive at the villa you are taken into the audience room and then into the dining room. You notice the elaborate mosaics. Draw some of the motifs between the four seasons and the picture of Jupiter disguised as a bull.

These were used as good luck symbols. Does this tell you anything about the religion of the family?

Why do you think the four seasons have been shown in the mosaic? Does this tell us anything about the family's religion?

One of the servants tells you about the picture of the water nymphs in the cellar, and you go down to have a look. Describe the painting. Why do you think it might have been painted? Does it tell us anything about the religion of the family?

You enter the room above the cellar, which has elaborate wall paintings. One of these is of a strange symbol. Draw or describe it below. (As the room above the cellar no longer exists, you will need to look at the copy of the wall painting on the wall near the entrance door to the site)

Does this tell us anything about what the room was used for?

Look around the site for any other clues to religion. What are your conclusions about the religion of the family that live on the site?

Activity Sheet 4

The Roman builder

You are employed by Bodgit, Fudgit et Filius. You have been sent by the master mason to record the site and what needs to be done to make it habitable again.

You will need:
a pencil
a compass
your copy of the Roman builder's handbook

TO BODGIT. FVDGIT ET FILIVS
BVILDERS AND TOMBSTONE MASONS

GREETINGS

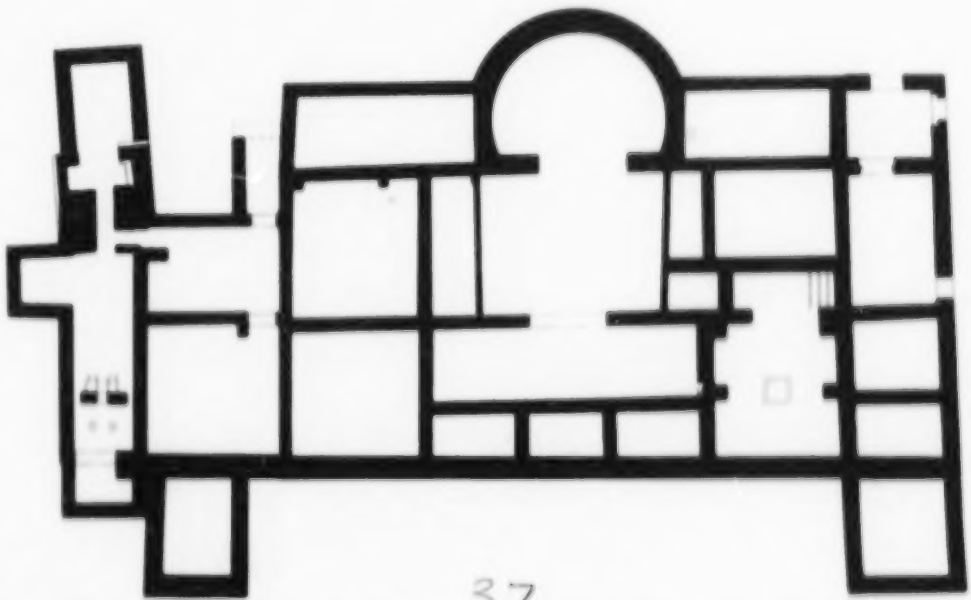
I WRITE THIS AT LVLLINGSTONE ROMAN VILLA. MY HOVSE BVRNT DOWN RECENTLY. THE LONDINIVM INSVRANCE COMPANY HAS ASKED ME TO PROVIDE A BVILDERS ESTIMATE FOR THE NECESSARY REPAIR WORK. I HAVE HAD ALL THE BVRNT TIMBER AND OTHER RVBBISH REMOVED FROM THE SITE. PLEASE SEND ME YOVR MOST RELIABLE WORKER TO PREPARE PLANS AND AN ESTIMATE.
VALETE.

ANTONIVS DOMO PROFVGVS

Plan of site

I How big is the villa? Mark the length and width in paces on the plan.

II Mark north on the plan.



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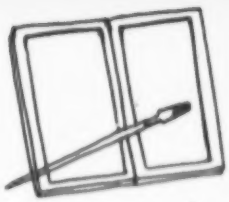


III Make a sketch of a small portion of wall. Are there any patterns in it? Label the different building materials on your sketch, and mark on the plan where this wall is.

IV Mark the water supply onto the plan.

V How would you suggest getting water to the house?

VI Mark onto the plan where you suggest toilets are built. Why would you suggest building them there?

VII Mark onto the plan the bath block, the dining room, the kitchen and the chapel.

VIII What other rooms will be needed if a family is to live at Lullingstone again?

IX Mark onto the plan where you would put these rooms.

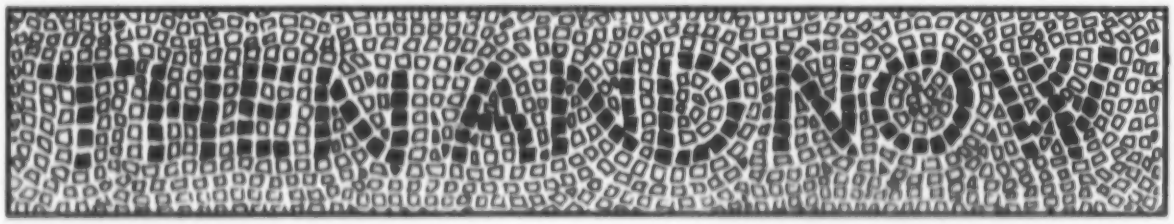
X Choose one room and shade it on your plan. Think about the building work necessary to make it habitable again. Refer to your copy of the *Roman Builder's Handbook*. List in the box below the different materials that would be needed to do this work and where they would be used.

Room.....

Function.....

Materials needed	Where used

Activity Sheet 5



MY HOME	LULLINGSTONE ROMAN VILLA
I live in a house/flat/villa	Lullingstone is a house/flat/villa
Number of rooms	Number of rooms
1 2 3 4 5 6 7 8 9 10 more than 10	1 2 3 4 5 6 7 8 9 10 more than 10
The outside walls are made from	The outside walls are made from
The inside walls are decorated with	Inside walls decorated with
The floors are covered with	The floors are made from
Water comes from	Water comes from
Heated by	Heated by
The bathroom is	The baths are
1 2 3 4 rooms	1 2 3 4 rooms and a furnace

On the back of this sheet draw a part of the mosaic floor if you have time.

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39 40

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Books which have an * are suitable for pupils.

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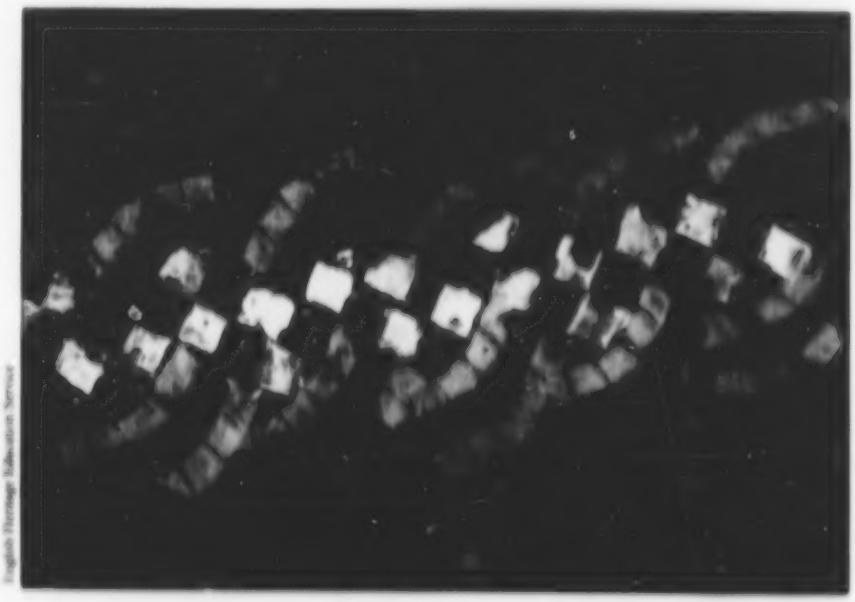
Stamp printed mosaic design



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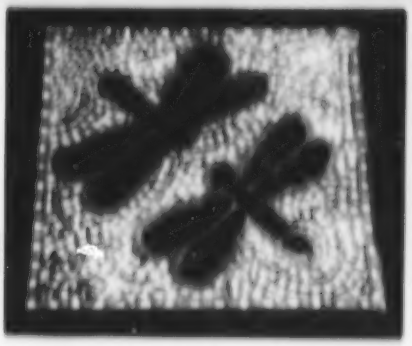

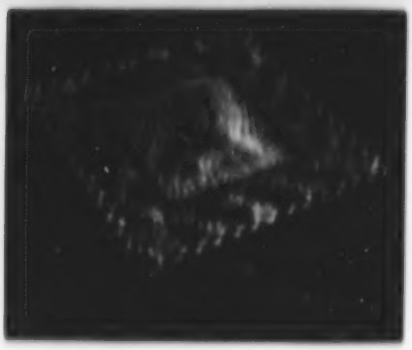

Mosaics made by pupils working with a professional mosaicist on a community arts project.

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Archaeological Detectives, English Heritage video, 1990/1991, 79 mins. Groups of children investigate buildings and objects from the past.

Pupils making a mosaic.

Romans and Celts, Channel 4, 1997, 75 mins. Five programmes about life in Roman Britain.

Talkin' Roman, English Heritage video, 1996, 20 mins. Investigates life in Britain under the Romans, using a chat show format.

Computer resources

Real Romans is a CD-ROM with a book for Key Stage 2 pupils. The CD-ROM includes a tour (with audio guide) of three Roman sites – Housesteads Fort, Wroxeter City and Lullingstone Villa. The book gives an introduction to the Romans and their world and is full of activities and things to discover. English Heritage/AGI Developments 1999.

Posters

Archaeological Detectives Poster Game, English Heritage, 1998. Four posters help pupils understand the nature of historical evidence.

A Roman Villa Facing Front Door, available from English Heritage, 1995. Full colour poster shows the story of a Roman villa built, then in decline.

Back cover: An artist's impression showing the house as it might have been in AD350 (English Heritage Photo Library).

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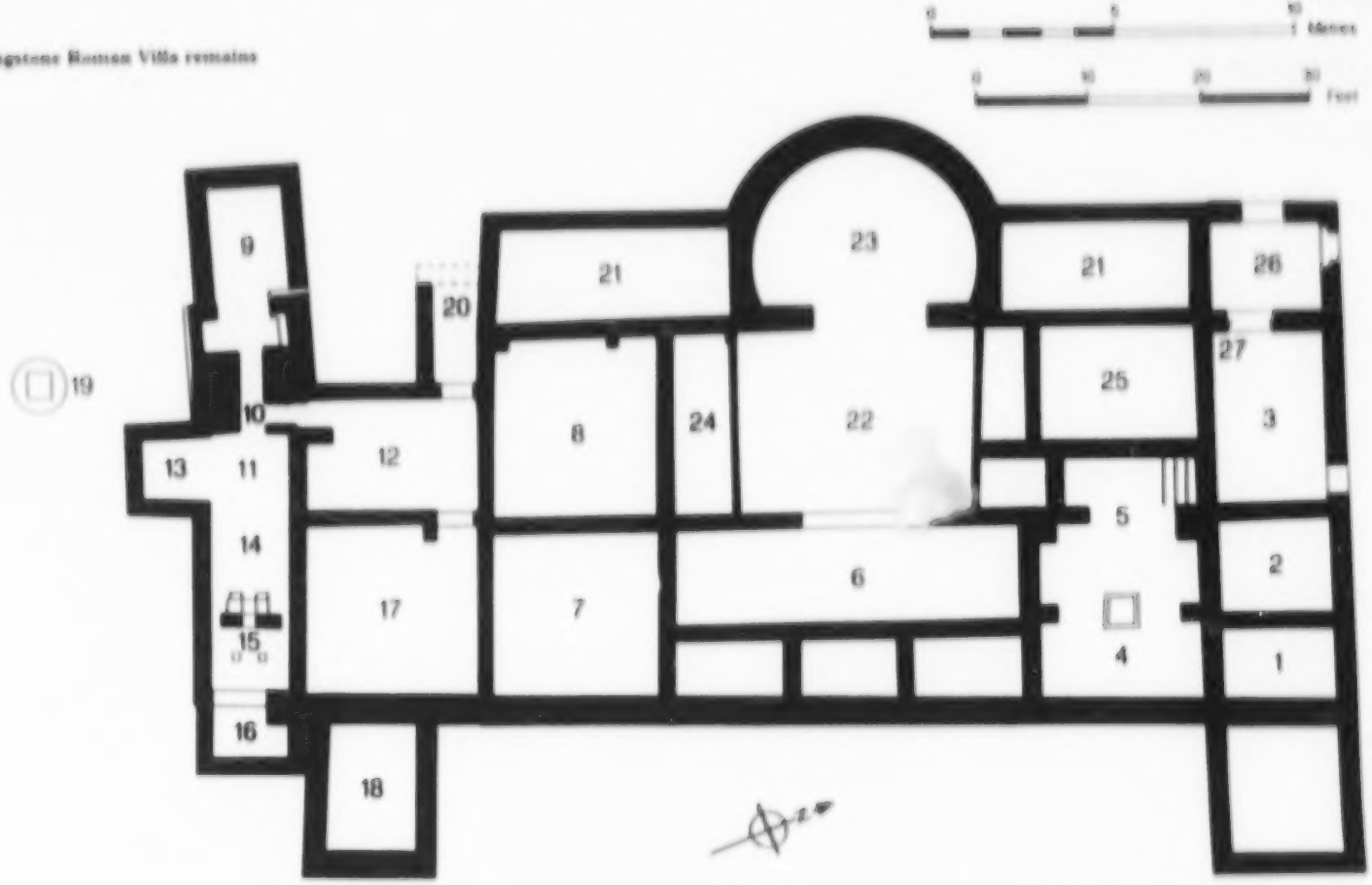
Plan of Lullingstone Roman Villa remains



KEY 1–3 *Heated Rooms (built over earlier stairs to cellar).* 3 *This room later used as entrance to a Christian Chapel over the Cellar.* 4–5 *Cellar (under the ground-floor rooms).* 6 *East Verandah (linking the wings).* 7 *South 'wing room' (matching former north 'wing room' above cellar).* 8 *Store or kitchen.* 9–18 *Baths, comprising (9) fuel store, (10) furnace, (11) hot room, (12) hot dry room, (13) hot water bath, (14) tepid room, (15) cold room, (16) water tank, (17) recreation room, and (18) large cold plunge bath.* 19 *Well.* 20 *Stairs to baths.* 21 *West Verandah (originally full length, but later bisected by apsed Dining Room).* 22 *Audience Chamber (with mosaic floor).* 23 *Dining Room (with mosaic floor).* 24 *Passage linking East and West Verandahs.* 25 *Probable bedroom.* 26 *Kitchen (later vestibule to Chapel).* 27 *Stairs to Cellar.*

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ENGLISH HERITAGE

Lullingstone Roman Villa

A teacher's handbook

Lullingstone Roman Villa is an exceptional Roman site, offering a wide range of study areas for pupils to explore. The villa was in use for almost the whole period of the Roman occupation in Britain, and the remains include fine mosaics, a wall painting and clear evidence of the bath suite. This book offers support to teachers studying Roman Britain with their pupils, and shows how the site can be related to its geographical context. It also offers suggestions for using the site as a stimulus for creative work, the study of technology or as the basis for an investigation into tourism.

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